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REPORT.

SEA FISHERIES BILL [H.L.]

Ordered to be printed 24th March 1904.

LONDON:

PRINTED FOR HIS MAJESTY'S STATIONERY OFFICE,

BY WYMAN AND SONS, LIMITED, FETTER LANE, E.C.

And to be purchased, either directly or through any Bookseller, from
EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; and
32, ABINGDON STREET, WESTMINSTER, S.W.; or

OLIVER AND BOYD, EDINBURGH; or

E. PONSONBY, 116, GRAFTON STREET, DUBLIN.

1904.

R E P O R T

FROM THE

SELECT COMMITTEE OF THE HOUSE OF LORDS

ON THE

SEA FISHERIES BILL [H.L.];

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

M I N U T E S O F E V I D E N C E,

AND APPENDIX.

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ORDER OF REFERENCE.

SEA FISHERIES BILL [H.L.]

Die Martis, 16° Februarii 1904.

Read 2a (according to order), and referred to a Select Committee.

Die Martis, 23° Februarii 1904.

The following Lords were named of the Select Committee :

Marquis of Abercorn (*Duke of
Abercorn*).
Earl of Onslow.
Earl of Yarborough.

Lord Meldrum (*Marquess of
Huntly*).
Lord Tweedmouth.
Lord Northbourne.
Lord Heneage.

The Committee to appoint their own Chairman.

Die Jovis, 25° Februarii 1904.

Select Committee to meet on *Monday* next, at half-past Three o'clock.

Die Jovis, 3° Martii 1904.

The evidence taken before the Select Committee from time to time to be *printed*, but no copies to be delivered out except to Members of the Committee, and to such other persons as the Committee shall think fit, until further order.

THAT the COMMITTEE appointed by your Lordships' House to consider the Sea Fisheries Bill have examined witnesses representing the Board of Agriculture and Fisheries, the Scottish Fishery Board, the Irish Department of Agricultural Education, the Fishmongers' Company, the Marine Biological Association, the Steam Trawling Trade, and others ; as well as fishermen and owners of sailing smacks round the coast of England. They have also examined representatives from the Sea Fisheries District Committees along the coast, and have agreed to the following Report :—

5. This COMMITTEE, therefore, sought to ascertain what further inquiry and investigation had been made since 1900, and they found that the various suggestions made by the Select Committee of the House of Commons have been investigated by the Board of Trade and more recently
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Elliott, 26. by the Board of Agriculture and Fisheries. In this respect the Committee have had an advantage over any previous fishery inquiry, in that in addition to statistics regarding the quantity and value of the fish landed, they have had laid before them statistical data regarding the quantity of small plaice landed at each of the trawling ports on the East Coast for a complete year, the proportion they bear to the total take, the locality, and season at which the majority are caught, and the actual size of the fish in boxes of "small plaice."

Hellyer, 1396. 6. The COMMITTEE have found great difficulty in arriving at any conclusion as to how far the amount of flat fish in the North Sea has diminished in recent years. The statistics of landing are in no way comparable one year with another, inasmuch as the catching power of the vessels and the distance to which they can go, is constantly increasing. The substitution of steam for sailing trawlers, the adoption of the Otter Trawl, and the increased length of beam of the Beam Trawl, the discovery of extensive fishing grounds off the coast of Iceland and the Faroe Islands, leave no room for comparison of the catch formerly made in nearer waters by the old-fashioned boats.

Towse, 858.

Appendix A. 7. Evidence was adduced which showed that of the 887,599 cwts. of plaice landed in England and Wales, from 110,000 to 115,000 cwts. landed at East Coast ports came from Iceland, Faroe, and fishing grounds outside the limits of the North Sea.

Appendix D.

Lovell, 2391-2 ; 2402. 8. Mr. Lovell, who claimed to represent 2,000 persons engaged in the fried fish trade in London, informed the Committee that it was increasingly difficult to get plaice of a size sufficient to meet the demands of the trade and, in consequence, turbot, brill, skate, megrims, and even dog-fish were used in the fried fish business, though the preference for plaice is such that all fried fish is sold under that designation.

Appendix C. 9. Your COMMITTEE have ascertained that Great Britain and Norway are the only countries bordering on the North Sea in which there is no size limit for flat fish ; that in Denmark there is a size limit for plaice of $9\frac{3}{4}$ inches, in Belgium and at the North Sea Ports of Germany of 7 inches, in Holland of $6\frac{1}{4}$ inches, and in France of $5\frac{1}{2}$ inches. In the United States, to which reference was made in the Report of the Select Committee of the House of Commons in 1900, there is no Federal Statute bearing on the subject, and the Bureau of Fisheries do not recall any State legislation, which relates directly to the protection of undersized fish, and are not aware that any investigations have been undertaken with regard to the distribution of small flat fish.

Elliott, 28.

Archer, 177. 10. From an examination of the statistics of the quantity of small plaice landed in London by the carriers bringing fish direct from certain fleets fishing in the North Sea, it has been ascertained that the receipt of boxes of small plaice dates from March to October, and is most prevalent from April to July inclusive, the quantity landed in those months being 80 per cent. of the catch of the first complete year for which statistics are available. Further, that of 229,076 cwts. landed in those months in 1902 and 1903, 173,693 cwts. were caught off the Danish coast, east of longitude $7^{\circ}30'$, south of latitude 56° , and north of latitude $53^{\circ}30'$, being the sea around Heligoland and between that island and the Horn Reef. Small plaice are estimated to have been 82 per cent. of the total catch of all fish on these grounds in 1902 and 67 per cent. in 1903, while the value in 1902 of the total catch was 69,988*l.*, of which 50,241*l.* was small plaice, or 71 per cent. of the total, and in 1903 62,296*l.*, of which small plaice represented 35,028*l.*, or 56 per cent. This seems to prove conclusively that a very large proportion of the total amount of small plaice sold comes from that area, and is caught in those months.

Archer, 164.

Archer, 2546-8.

11. Evidence was, also, given as to the actual size of fish in boxes of "small plaice," which showed that in 1902 plaice under 11 inches formed 63 per cent. in weight, and from 40 per cent. to 54 per cent. in value of the total catch of trawlers fishing on those grounds; and in 1903, 53 per cent. in weight, and from 29 per cent. to 40 per cent. in value, the limits being the lowest and the highest possible value which could be assigned to those below 11 inches. On the other hand, it was shown that plaice of all sizes caught by vessels fishing in the same latitudes at about the same period but outside those grounds, viz., between 2 deg. and 6 deg. east longitude, formed only 6 per cent. in weight and 12 per cent. in value of the total catch in 1902 and 1903 respectively. This affords strong grounds for believing not only that the imposition of a size limit would make it unremunerative to fish on the shallow grounds on the eastern side of the North Sea, but that it would interfere very little, if at all, with fishing operations in deeper waters.

Appendix H.

Archer, 163-178.

12. It is to be regretted that similar statistics from markets other than Billingsgate are not available, notwithstanding the fact (1) that £42,000 was allocated in 1902, to be expended within three years by this country in the investigation of the fishing grounds of the North Sea, in conjunction with other nations, parties to the International Council for the Investigation of that Sea; and (2) that a special committee of this Council was appointed to formulate a scheme for the purpose of dealing with this question. The Foreign Office have been informed by His Majesty's Minister at Copenhagen that more information on these lines was expected from this country, which takes so large a proportion of the catch of fish in the North Sea.

D'Arcy Thompson
642-6.

Archer, 186-7.

Garstang, 2204-
10.

13. It is, however, satisfactory to note that the method of investigation which was adopted by the Board of Trade, and more recently by the Board of Agriculture and Fisheries, and had already received the approval of the Ichthyological Committee, has now been recognised by that Council who, at its recent meeting at Hamburg, passed the following resolution:—

"The Council considers it highly desirable that full and careful statistics be collected at the chief port of entry, on the question of the destruction of small fish, with especial reference to the size, place, and season of capture of young plaice and other flat fish, and desires to bring before the Governments concerned the necessity of allocating out of the funds for fishery research at their disposal a provision sufficient for the thorough carrying out of this portion of the work."

Archer, 184.

14. The Bill before your Lordships' House differs from former Bills in that it proposes instead of a fixed limit below which fish shall not be *sold* to enable the Board of Agriculture and Fisheries to frame Orders for prohibiting the *landing* of any flat fish not exceeding such length as the Board may from time to time prescribe, and subject to such exceptions and conditions as may be prescribed. While some hardship would undoubtedly result to the line fishermen and small trawling vessels round the coast if the sale of undersized fish were entirely prohibited, it appears to your Committee to be possible to make Orders which would have the effect of making it no longer worth while for the large steam trawlers to frequent the eastern grounds referred to during those months when undersized fish are most abundant.

Elliott, 32.

Catts, 1555-61.

Towse, 872.

15. The Secretary of the Fishmongers' Company informed the Committee that at various meetings of the National Sea Fisheries Protection Association, the representatives of the trade had asked to be defended against themselves.

Towse, 884.

16. Sir Thomas Elliott, Secretary to the Board of Agriculture and Fisheries, was of opinion that this could be accomplished by an Order of the Board which should prohibit the landing of plaice under 11 inches by steam trawlers, or carriers, or by sailing trawlers of 65 tons and upwards

Elliott, 2561-5

Cunningham,
1193.

at all ports during the months of March to July inclusive. An Order such as the one suggested would not protect *all* the undersized fish in the North Sea, but would, if effectual, leave a very large proportion, which would otherwise be taken in the trawls, to grow to a more marketable size.

Doughty, 653.
Alward, 1426
Garstang, 2162. 17. It was suggested that the Bill itself should prescribe the limit within which the Board of Agriculture should have power to make Orders. Your Committee cannot agree that it is desirable so to tie the hands of the Department, in view of the difficulty of securing the time and attention necessary from Parliament to effect changes in a law once made.

Holt, 1119-20.
Pibel, 1886-7. 18. The evidence tends to show that over a period of years the average size of the fish may decrease, and the larger fish become less plentiful, and that consequently a limit which would be efficacious to-day might require in the future to be either raised or lowered: while if the prohibition were limited to the class of vessels that fish the eastern grounds now, other vessels which do not at present go there might be tempted to take advantage of the prohibition imposed on the larger ones.

Doughty, 2584. 19. In view of the expression of opinion not only from the ports at which the smaller trawlers are registered, but even from Grimsby itself, that some limitation should be placed on the absolute powers of the Board of Agriculture and Fisheries to make orders, your Committee are of opinion that such orders should not be made until the draft thereof has lain for a period of 30 days on the Table of each House of Parliament, and they have therefore added at the end of Sub-Clause 1, a proviso to effect this object.

Archer, 189. 20. The ideal manner of protecting the fishing grounds in the North Sea most frequented at certain seasons of the year by young and immature fish, would be by an International agreement between all the Powers whose fishermen fish in that sea, but up to the present time little disposition has been shown by the Governments of those nations to enter into a convention for this purpose. The Committee venture to express a hope that His Majesty's Government will not relax their efforts to secure such a convention.

Garstang, 2256-9. 21. The COMMITTEE have reason to hope that such a consummation may be ultimately attained, and, at any rate, the first step towards its attainment is the passing of this Bill, inasmuch as the International Council have passed the following Resolution:—"The Council resolves that it is desirable that, in the event of a law being passed in Great Britain giving powers to make experiments for restricting the destruction of undersized flat fish, powers be also taken by the various Governments concerned to make experiments for restricting the destruction of undersized flat fish."

Archer, 200-1.
Pibel, 1867.
Elliott, 51. 22. The COMMITTEE were informed that there is comparatively little market for undersized flat fish on the Continent, and that foreign trawlers at present find their best market for undersized fish in England, which, of course, could be prohibited by an Order of the Board of Agriculture and Fisheries.

23. The COMMITTEE are of opinion that it is desirable that so far as possible there should be greater uniformity of bye-laws round the whole of the coast, and they think that Clause 2 of the Bill will tend in this direction.

24 March 1904.

LORDS AND MEMBERS PRESENT AND MINUTES OF PROCEEDINGS
AT EACH SITTING OF THE COMMITTEE.

Die Lunæ, 29^o Februarii 1904.

LORDS PRESENT :

Marquess of Abercorn (*Duke of
Abercorn*).
Earl of Onslow.
Earl of Yarborough.

Lord Meldrum (*Marquess of
Huntly*).
Lord Tweedmouth.
Lord Northbourne.

The Order of Reference is read.

It is moved, that the Earl of Onslow do take the Chair.

The same is *agreed to*.

It is moved, That the Committee be an open one.

The same is *agreed to*.

The Course of Proceedings is considered.

Ordered, That the Committee be adjourned till Thursday next, at eleven o'clock.

Die Jovis, 3^o Martii 1904.

LORDS PRESENT :

Marquess of Abercorn (*Duke of
Abercorn*).
Earl of Yarborough.
Lord Meldrum (*Marquess of
Huntly*).

Lord Tweedmouth.
Lord Northbourne.
Lord Heneage.

The Earl of ONSLOW in the Chair.

The Order of Adjournment is read.

The Proceedings of Monday last are read.

The following Witnesses are called in and examined; viz., Sir *Thomas Elliott, K.C.B.*, Mr. *Walter E. Archer*, Mr. *Alexander Millikin* and Mr. *James Ingram*. (*Vide the Evidence*.)

Ordered, That the Committee be adjourned till To-morrow at Eleven o'clock.

Die Veneris, 3^o Martii 1904.

LORDS PRESENT:

Marquess of Abercorn (<i>Duke of Abercorn</i>).	Lord Tweedmouth.
Earl of Yarborough.	Lord Northbourne.
Lord Meldrum (<i>Marquess of Huntly</i>).	Lord Heneage.

The Earl of ONSLOW in the Chair.

The Order of Adjournment is read.

The Proceedings of yesterday are read.

The following Witnesses are called in and examined, viz.: Mr. *Reginald McLeod, C.B.*, Professor *D'Arcy Thompson, C.B.* Mr. *George Doughty, M.P.*, Dr. *Wemyss Fulton, F.R.S.E.*, Mr. *J. Wrench Towse* and Mr. *Hamon Le Strange*. (*Vide the Evidence*.)

Ordered, That the Committee be adjourned till Thursday next, at Eleven o'clock.

Die Jovis, 10^o Martii 1904.

LORDS PRESENT:

Marquess of Abercorn (<i>Duke of Abercorn</i>).	Lord Tweedmouth.
Earl of Yarborough.	Lord Northbourne.
Lord Meldrum (<i>Marquess of Huntly</i>).	Lord Heneage.

The Earl of ONSLOW in the Chair.

The Order of Adjournment is read.

The Proceedings of yesterday are read.

The following Witnesses are called in and examined, viz.:—Rev. *William Spotswood Green*, Mr. *Ernest William Holt*, Mr. *Joseph Thomas Cunningham, F.Z.S.*, Mr. *Charles Hillyer*, Mr. *George Lowe Alward*, and Mr. *Arnall Brame Capps*. (*Vide the Evidence*.)

Ordered, That the Committee be adjourned till To-morrow at Eleven o'clock.

Die Veneris, 11^o Martii 1904.

LORDS PRESENT:

Marquess of Abercorn (<i>Duke of Abercorn</i>).	Lord Northbourne.
Earl of Yarborough.	Lord Heneage.

The Earl of ONSLOW in the Chair.

The Order of Adjournment is read.

The Proceedings of yesterday are read.

The following Witnesses are called in and examined, viz.:—Mr. *Edward Winleatt*, Mr. *Daniel Mearns*, Mr. *John Hannel Irvine*, Mr. *Morgan Tutton*, Mr. *William Henry Pibel*, Mr. *Robert Henry Grice*, Mr. *James Bloomfield*, and Mr. *Joseph Henry Barber*. (*Vide the Evidence*.)

Ordered, That the Committee be adjourned till Thursday next at Eleven o'clock.

Die Jovis, 17° Martii 1904.

LORDS PRESENT:

Marquess of Abercorn (*Duke of
Abercorn*).
Earl of Yarborough.

Lord Meldrum (*Marquess of
Huntly*).
Lord Tweedmouth.
Lord Heneage.

The Earl of ONSLOW in the Chair.

The Order of Adjournment is read.

The Proceedings of Friday last are read.

The following Witnesses are called in and examined, viz., Mr. *John Fell*, Mr. *Arthur Thomas Dawson*, Mr. *Walter Garstang*, Mr. *William Thomas Lovell*, Mr. *Charles Jeffs*, Mr. *James Jackman*, Mr. *Henry Goodbourn* and Mr. *James Sydenham*. (*Vide the Evidence*).

Ordered, That the Committee be adjourned till To-morrow at Eleven o'clock.

Die Veneris, 18° Martii 1904.

LORDS PRESENT :

Marquess of Abercorn (*Duke of
Abercorn*).
Earl of Yarborough.

Lord Meldrum (*Marquess of
Huntly*).
Lord Tweedmouth.

The Earl of ONSLOW in the Chair.

The Order of Adjournment is read.

The Proceedings of yesterday are read.

The following Witnesses are called in and examined, viz., Sir *Arthur Vivian, K.C.B.*, Mr. *Walter Archer* (re-called), Sir *Thomas Elliott, K.C.B.* (re-called) and Mr. *George Doughty, M.P.* (re-called.) (*Vide the Evidence*).

The Course of Proceedings is considered.

It is Moved that the Chairman do draw up a Special Report.

The same is *agreed to*.

Ordered, That the Committee be adjourned till Thursday next.

Die Jovis, 24° Martii 1904.

LORDS PRESENT :

Marquess of Abercorn (*Duke of
Abercorn*).
Earl of Yarborough.

Lord Meldrum (*Marquess of
Huntly*).
Lord Tweedmouth.
Lord Northbourne.
Lord Heneage.

The Earl of ONSLOW in the Chair.

The Order of Adjournment is read.

The proceedings of yesterday are read.

A DRAFT REPORT prepared by the Chairman is laid before the Committee, and is as follows:—

“The Committee appointed by your Lordships’ House to consider the Sea Fisheries Bill have examined witnesses representing the Board of Agriculture and Fisheries, the Scottish Fishery Board, the Irish Department of Agricultural Education, the Fishmongers’ Company, the Marine Biological Association, the Steam Trawling Trade, and others; as well as fishermen and owners of sailing smacks round the coast of England. They have also examined representatives from the Sea Fisheries District Committees along the coast.

“1. Several Bills have been introduced into Parliament to prevent the destruction of undersized flat fish, and more than one Committee has considered the subject.

“2. In 1893, a Select Committee of the House of Commons reported that a considerable diminution had occurred amongst the more valuable classes of flat fish in the great fishing grounds of the North Sea, especially among soles and plaice, and they suggested a size limit in this country approximate to that already adopted by some Continental countries.

“3. The last Bill was that introduced into the House of Commons by Mr. Ritchie in 1900, and proposed to prohibit the sale in all places and at all times of plaice and soles under 8 inches, and turbot and brill under 10 inches.

“4. That Bill was referred to a Select Committee of the House of Commons, who reported in the first place that it was proved beyond doubt that there was a very serious diminution of the supply of certain kinds of flat fish, particularly in the North Sea, that the evil was a growing one, and that in default of a remedy the consequences to the fishing industry in the diminished supply of flat fish would at no very distant future be disastrous. The Committee also thought that it was established that there were certain well-known areas in the North Sea, where small and young fish undoubtedly do congregate, and that to prevent fishing in such areas would be obviously of great value. The Committee were of opinion that one of the causes of this diminution was the destruction of immature fish. The Committee felt, however, that it would not be expedient to pass the Bill without further inquiry and investigation, especially as to whether the prohibition of the sale of fish below the limits proposed in the Bill would not make it worth while for fishermen to resort to places where the small fish abound, and as to the particular sizes proposed to be prohibited. They also suggested that the precise position of foreign law in regard to restrictive legislation and its results should be ascertained.

“5. Your Committee, therefore, sought to ascertain what further inquiry and investigation had been made since 1900, and they found that the various suggestions made by the Select Committee have been investigated by the Board of Trade, and more recently at the hands of the Board of Agriculture and Fisheries. In this respect they have had an advantage over any previous fishery inquiry, in that in addition to statistics regarding the quantity and value of the fish landed, they have had laid before them statistical data regarding the quantity of small plaice landed at each of the trawling ports on the East Coast for a complete year, the proportion they bear to the total take, the place and season at which the majority are caught, and the actual size of the fish in boxes of “small plaice.

“6. Your Committee have found great difficulty in arriving at any conclusion as to how far the amount of flat fish in the North Sea has diminished in recent years. The statistics of landing are in no way comparable one year with another, inasmuch as the catching power of the vessels and the distance to which they can go, is constantly increasing. The substitution of the steam for the sailing trawlers, the invention of the Otter Trawl, the discovery of extensive fishing grounds off the coast of Iceland and the Farøe Islands, leaves no room for comparison of the take formerly made in nearer waters by the old-fashioned boats.

“7. Evidence was adduced which showed that of the 887,599 cwts. of plaice landed in England and Wales, from 110,000 to 115,000 cwts. landed at East Coast ports came from Iceland, Farøe, and fishing grounds outside the limits of the North Sea.

“8. Mr. Lovell, who claimed to represent 2,000 persons engaged in the fried fish trade in London, informed the Committee that it was increasingly difficult to get plaice of a size sufficient to meet the demands of the trade, and, in consequence, skate, megrins, and even dog-fish were used in the fried fish business, though the demand for plaice is such that all fried fish is sold under that designation.

“9. Your Committee have ascertained that Great Britain and Norway are the only countries bordering on the North Sea in which there is no size limit for flat fish; that in Denmark there is a size limit for plaice $9\frac{3}{4}$ inches, in Belgium and at the North Sea Ports of Germany of 7·1 inches, in Holland of $6\frac{3}{4}$ th inches, while in the United States there is no Federal Statute bearing on the subject, and the Bureau of Fisheries do not recall any State legislation, which relates directly to the protection of immature fish, and no investigations have been undertaken with regard to the distribution of small flat fish.

"10. From an examination of the statistics of the quantity small plaice landed in London by the carriers bringing fish direct from certain fleets fishing in the North Sea, it has been ascertained that the occurrence of boxes of small plaice dates from March to October, and is most prevalent from April to July inclusive, the quantity landed in those months being 80 per cent. of the catch of the first complete year for which statistics are available. Further, that of 229,076 cwts. landed in those months in 1902 and 1903, 173,693 cwts. were caught off the Danish coast, east of longitude 7°30' south, south of latitude 56°, and north of latitude 53°30', being the sea between and around Heligoland and the Horn Reef. Small plaice are estimated to have been 82 per cent. of the total catch of all fish on these grounds in 1902 and 67 per cent. in 1903, while the value in 1902 of the total catch was 69,988*l.*, of which 50,241*l.* was small plaice, or 71 per cent. of the total, and in 1903 62,296*l.*, of which small plaice represented 35,028*l.*, or 56 per cent. This seems to prove conclusively that a very large proportion of the total amount of small plaice sold comes from that area, and is caught in those months.

"11. Evidence was, also, given as to the actual size of fish in boxes of "small plaice," which showed that in 1902 plaice under 11 inches formed 60 per cent. in weight, and from 40 per cent. to 54 per cent. in value of the total catch of trawlers fishing on those grounds; and in 1903, per cent. in weight, and from 29 per cent. to 39 per cent. in value, the limits being the lowest and the highest possible value which could be assigned to those below 11 inches. On the other hand, it was shown that plaice of all sizes caught by vessels fishing in the same latitudes at about the same period but outside those grounds, viz., between 2 deg. and 6 deg. east longitude, formed only 6 per cent. in weight and 12 per cent. in value of the total catch in 1902 and 1903 respectively. This affords strong grounds for believing not only that the imposition of a size limit would make it unremunerative to fish on the shallow grounds on the Eastern side of the North Sea, but that it would interfere very little, if at all, with fishing operations in deeper waters.

"12. It is to be regretted that similar statistics from markets other than Billingsgate are not available, notwithstanding the fact (1) that a large sum of money is being annually expended by this country in the investigation of the fishing grounds of the North Sea, in conjunction with other nations, parties to the International Council for the Investigation of the Sea; (2) that it was for the elucidation of this problem that England consented to become a party to these investigations; and (3) that a special committee was appointed to formulate a scheme for the purpose of dealing with this question. It is, however, satisfactory to note that the method of investigation which was adopted by the Board of Trade, and more recently by the Board of Agriculture and Fisheries, and has already received the approval of the Ichthyological Committee, has now been recognised by that Council who, &c. . . ., and have given a guarantee that it will be vigorously carried out by placing the matter in the hands of the Central Bureau itself. That Council at its recent meeting at Hamburg passed the following resolution:—

"The Council considers it highly desirable that full and careful statistics be collected at the chief port of entry, on the question of the destruction of small fish, with special reference to the size, place, and season of capture of young plaice and other flat fish, and desires to bring before the Governments concerned the necessity of allocating out of the funds for fishery research at their disposal a provision sufficient for the thorough carrying out of this portion of the work."

"13. The Foreign Office, however, have been informed by his Majesty's Minister at Copenhagen that more information on these lines was expected by the Bureau from a country which takes so large a proportion of the catch of fish in the North Sea.

"14. The Bill before your Lordship's House differs from former Bills in that it proposes instead of a fixed limit below which fish shall not be sold to enable the Board of Agriculture and Fisheries to frame Orders for prohibiting the landing of any flat fish not exceeding such length as the Board may prescribe, and subject to such exceptions and conditions as may be prescribed. While some hardship would undoubtedly result to the line fishermen and small trawling vessels round the coast if the sale of undersized fish were entirely prohibited (especially if the limit were not a very low one), it appears to your Committee to be possible to make Orders which would have the effect of making it no longer worth while for the large steam trawlers to frequent the Eastern grounds referred to during those months when undersized fish are most abundant.

"15. The Secretary of the Fishmongers' Company informed the Committee that at various meetings of the National Sea Fisheries Protection Association, the representatives of the trade asked to be defended against themselves.

"16. Sir Thomas Elliott, Secretary to the Board of Agriculture and Fisheries, was of opinion that this could be accomplished by an Order of the Board which should prohibit the landing of plaice under 11 inches by steam trawlers, or carriers, or by sailing trawlers of 65 tons and upwards at all ports during the months of March to July inclusive. An Order such as the one suggested would not protect all the undersized fish in the North Sea, but would, if effectual, leave a very large proportion, which would otherwise be taken in the trawls, to grow to a more marketable size.

"17. Some witnesses suggested that the Bill itself should prescribe the limit within which the Board of Agriculture should have power to make Orders. Your Committee cannot agree that it is desirable so to tie the hands of the Department, in view of the difficulty of securing the time and attention necessary from Parliament to effect changes in a law once made.

" 18. The evidence tends to show that over a period of years the average size of the fish may decrease, and the larger fish become less plentiful, and that consequently a limit which would be efficacious to-day might require in the future to be either raised or lowered : while if the prohibition were limited to the class of vessels that fish the eastern grounds now, other vessels which do not at present go there might be tempted to take advantage of the prohibition imposed on the larger ones.

" 19. The ideal manner of protecting these grounds would, without doubt, be an International agreement, but up to the present there has not been much disposition shown by [other nations to adopt this policy.

" 20. Your Committee have reason to hope that such a consummation may be ultimately attained, and, at any rate, the first step towards its attainment is the passing of this Bill, inasmuch as the International Council have passed the following Resolution :—' The Council resolves that it is desirable that, in the event of a law being passed in Great Britain giving powers to make experiments for restricting the destruction of undersized flat fish, powers be also taken by the various Governments concerned to make experiments for restricting the destruction of undersized flat fish.'

" 21. Your Committee were informed that there is comparatively little market for undersized flat fish on the Continent, and that foreign trawlers would find their best market for undersized fish in England, which, of course, could be prohibited by an Order of the Board of Agriculture and Fisheries.

" 22. In view of the expression of opinion not only from the ports at which the smaller trawlers are registered, but even from Grimsby itself, that some limitation should be placed on the absolute powers of the Board of Agriculture and Fisheries to make orders, your Committee are of opinion that such orders should not be made until the draft thereof has lain for a period of 30 days before each House of Parliament, and they have therefore added at the end of Sub-Clause 1, a proviso to effect this object.

It is moved that the said DRAFT REPORT be considered.

The same is *agreed to*.

Paragraph 1 is read, and *agreed to*.

Paragraph 2 is read and *agreed to*, with an Amendment.

Paragraph 3 is read, and *agreed to*.

Paragraphs 4, 5, and 6 are read, and *agreed to*, with Amendments.

Paragraph 7 is read, and *agreed to*.

Paragraphs 8, 9, 10, 11, 12, 13, 14, 15, and 16 are read, and *agreed to*, with Amendments .

Paragraphs 17, 18, and 19 are read.

It is moved by the Lord Tweedmouth to leave out the said paragraphs and to insert in lieu thereof the following new paragraph, viz. :—

" Your Committee are of opinion that powers should be given to the Board of Agriculture and Fisheries to make orders prohibiting the landing from steam trawlers, steam carriers, and sailing smacks of 65 tons and upwards of turbot and brill not exceeding 13 inches in length, and soles and plaice not exceeding 11 inches in length, and, further, that the Board should have similar and concurrent powers with the sea fisheries district committees for the regulation of the various methods of fishing practised in the territorial waters of England, and power to make orders requiring the respect of bye-laws made by the Fishery Boards of Scotland and Ireland in English ports. The ideal method of protecting the fishing grounds in the North Sea most frequented at certain seasons of the year by young and immature fish would be by an international agreement between all the Powers whose fishermen fish in that sea, but up to the present time little disposition has been shown by the Governments of those nations to enter into a convention for this purpose."

On Question, That this Amendment be *agreed to* :

Contents (1).
Lord Tweedmouth.

Non-Contents (6).
Marquess of Abercorn (*Duke of Abercorn*).
Earl of Onslow.
Earl of Yarborough.
Lord Meldrum (*Marquess of Huntly*).
Lord Northbourne.
Lord Heneage.

The said Amendment is *disagreed to*.

Paragraph 17 is again considered, and *agreed to*, with an Amendment.

Paragraph 18 is again considered, and *agreed to*.

Paragraph 19 is again considered.

It is moved by the Lord Tweedmouth, in line 1, to leave out from “protecting” to the end of the paragraph, and to insert “the fishing grounds in the North Sea most frequented at certain seasons of the year by young and immature fish would be by an International agreement between all the Powers whose fishermen fish in that sea, but up to the present time little disposition has been shown by the Governments of those nations to enter into a convention for this purpose.”

The said Amendment is *agreed to*.

It is moved, at the end of the said paragraph, to add the following words, viz.:—“The Committee venture to express a hope that His Majesty’s Government will not relax their efforts to secure such a convention.”

The same is *agreed to*.

Paragraph 19 is *agreed to*, as amended.

Paragraph 20 is read and *agreed to*.

Paragraph 21 is read and *agreed to*, with Amendments.

It is moved after Paragraph 21 to insert the following new Paragraph, viz.: “The Committee are of opinion that it is desirable that so far as possible there should be greater uniformity of bye-laws round the whole of the coast, and they think that Clause 2 of the Bill will tend in that direction.”

The same is *agreed to*.

Paragraph 22 is read and *agreed to*, with Amendments, and ordered to be transposed to follow paragraph 18.

Ordered. That the Lord in the Chair do make the said Report to the House.

The Bill is then considered.

The Title and Preamble are read and *postponed*.

Clause 1 is read, and *agreed to*, with an Amendment.

Clauses 2 and 3 are read, and *agreed to*.

The Title and Preamble are again read and *agreed to*.

Ordered, That the Lord in the Chair do report the Bill to the House with an Amendment.

MINUTES OF EVIDENCE

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MEMBERS PRESENT:

Marquess of ABERCORN (Duke of
ABERCORN).
Earl of ONSLOW.
Earl of YARBOROUGH.

Lord MELDRUM (Marquess of HUNTLY).
Lord TWEEDMOUTH.
Lord NORTHBOURNE.
Lord HENEAGE.

THE RIGHT HON. THE EARL OF ONSLOW, G.C.M.G., IN THE CHAIR.

SIR THOMAS HENRY ELLIOTT, K.C.B., is called in; and Examined as follows:—

Chairman.

1. You are, I think, Secretary to the Board of Agriculture and Fisheries?—I am.

2. For a great many years past there has been a desire on the part of those interested in sea fisheries to have some protection afforded to undersized flat fish, has there not?—Yes, that desire has been expressed to us in various representations.

3. All round the coast of England there are Sea Fisheries Committees who have made representations to the Board of Trade and the Board of Agriculture, I believe?—That is so.

4. And every year there is a statutory Conference of those Fishery Committees which has been held at the Board of Trade, is there not?—Yes, that is so.

5. And now at the Board of Agriculture?—Yes.

6. How are those Committees constituted?—The local Fishery Committees are Committees of counties or boroughs, either singly or in combination, with the addition of members representing the fishery interests of the district. The number of fishery members must not be less than the number of members of the county or borough councils.

7. And have they made representations when meeting in conference in favour of a size limit for fish?—Yes, repeatedly. The first conference of these Committees at which the subject was considered was held, I think, in the year 1892, and since 1892 the conference has called attention to the necessity of legislation on this subject, placing the matter as the first item on their agenda paper on every occasion.

8. Every year since 1892?—Every year since 1892.

9. And has the desire of the delegates attending those conferences been practically unanimous?—Practically unanimous—on many occasions absolutely unanimous.

(O 10.) 129.

Chairman—continued.

10. Then in addition to the Sea Fisheries Committees there is, is there not, an association called the National Sea Fisheries Protection Association which is more particularly charged with looking after the fishing interests outside the territorial limits and in the North Sea generally?—That is so.

11. Can you say how that association is constituted?—It is composed of various local societies, or societies having special trade interests. I think at the present moment there are 34 societies affiliated with the National Association.

12. And they held a conference in September, 1902, did they not, at which a resolution was passed?—They held a conference in September, 1902, at which they unanimously adopted a resolution, which possibly I may read to your Lordships.

13. If you please.—“That this conference regards as conclusive the evidence of a widespread diminution of the supply of food fishes in the North Sea and adjacent grounds, and is of opinion that the only practicable remedy is the prevention of landing and sale of immature and undersized fish.”

14. That was before the fisheries were brought under the Board of Agriculture?—Yes.

15. The Act bringing the fisheries under the Board of Agriculture came into operation, did it not, on the 1st of October last?—That is so.

16. And there was a deputation, was there not, which waited upon me on the 22nd of that month, within about three weeks of the Board of Agriculture taking over the fishery duties, to urge upon me the necessity of bringing in a Bill to deal with undersized flat fish?—Yes.

17. Was that a representative deputation?—A representative deputation, composed of men representing fishery interests on various parts of the coast.

A 2

18. Will

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SIR THOMAS ELLIOTT, K.C.B.

[Continued.]

Chairman—continued.

18. Will you put in the report of that deputation?—I shall be pleased to do so.

19. Parliament has made several attempts. has it not, to legislate upon this question?—Yes, on several occasions.

20. Perhaps it is not necessary to go at length through them, but as a matter of fact there have been Bills in seven sessions of Parliament?—Yes, commencing from the Session of 1895.

21. The last of which was a Bill introduced by Mr. Ritchie in 1900, read a second time, and referred to a Select Committee of the House of Commons?—Yes.

22. That Bill was not further proceeded with, in consequence of the report of the Committee?—Yes.

23. What was the part of the report which recommended that the Bill should not be further proceeded with?—The Select Committee reported in the first place that it was proved beyond doubt that there was a very serious diminution of the supply of certain kinds of flat fish, particularly in the North Sea, that the evil was a growing one, and that in default of a remedy the consequences to the fishing industry in the diminished supply of flat fish would at no very distant future be disastrous. The Committee also thought that it was established that there were certain well known areas in the North Sea where small fish undoubtedly congregate, and that to prevent fishing in such areas would be of great value. The Committee were of opinion that one of the causes of this diminution of the supply was undoubtedly the destruction of immature fish. The Committee felt, however, that it would not be expedient to pass the Bill without further inquiry and investigation, especially as to whether the prohibition of the sale of fish below the limits proposed in the Bill would make it no longer worth while for fishermen to resort to places where the small fish abound, and as to the particular sizes proposed to be prohibited. They also suggested that the precise position of foreign law in regard to restrictive legislation and its results should be ascertained. And they referred particularly to the case of the United States.

24. Since then a good deal of additional information has been obtained, has it not?—Yes, since the report of the Select Committee of 1900, the various suggestions made by the Select Committee have been investigated by the Board of Trade, and more recently at the hands of the Board of Agriculture and Fisheries; with the result that the present proposal is now submitted to Parliament.

25. And it is with the object of bringing out those additional facts, that this Committee has been desired to investigate the subject?—I believe that is so.

26. I will ask another witness later on for the detailed statistics, but can you briefly say what are the new circumstances which have arisen since the report of the Select Committee of 1900?—In the first place the two Boards have been able to make improved arrangements for the collection of statistics. We are now in

Chairman—continued.

possession of information, although only for the year 1903, of the take of fish in the North Sea as distinguished from the take of fish elsewhere. There has also been during that period a classification of plaice into what is known in the trade as large, medium and small plaice. We have also received information as to the particular grounds and particular areas in the North Sea from which fish have been caught by the great trawling fleets. Then, in addition, special investigations have been made at Billingsgate Market, with the assistance of the Fishmongers Company, with a view to determine the proportions of the various sizes of plaice which have been landed. In addition, communications have been made with foreign powers as to the possibility of international action, and a Council of an international character has been established for the express purpose of investigating the conditions of the North Sea. The Board of Trade have also, as desired by the Select Committee, placed before Parliament in a Parliamentary paper published in 1901, full information as to the restrictive legislation in foreign countries, and the Board of Agriculture and Fisheries have since obtained some supplementary information which I shall be able to submit to your Lordships' Committee.

27. Have you got a summary of what the law is in Continental countries?—Yes, I have it here.

28. Perhaps you will add that of the United States of America, which was particularly referred to by the Select Committee of 1900, as being legislation that we had no information about?—I shall be glad to do so.

Lord Tweedmouth

29. All the statistics to which you have been referring only date from last year?—1903 was the first year in which we obtained separate statistics as to the take in the North Sea.

30. But these statistics have not been long enough for any conclusion to be come to with regard to the diminution?—No, we have, as yet, no comparative tables of the take in the North Sea.

Chairman.

31. You were going to refer, I think, to the legislation in foreign countries?—I can place before the Committee an abstract of restrictive legislation in all the countries bordering on the North Sea, with a summary of the replies which have been sent to us in response to the enquiries we have addressed to foreign Governments through the Foreign Office on the subject.

32. You have studied the proposed Bill, and perhaps you will point out to the Committee what are the special features which are aimed at in this Bill, and in what way its proposals differ from the proposals laid before Parliament by Mr. Ritchie in 1900?—The previous Bills on the subject have definitely laid down a limit of size for soles, plaice, turbot and brill. The Bill now before

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[Continued]

Chairman—continued.

before your Lordships does not lay down any definite limits of size, because it is based upon the opinion that in a matter of this kind elasticity and a certain measure of experimental action are necessary. The conditions of fishing are so very different, the small fisherman has of course to be separately considered from those engaged in the great trawling industry; and we thought it was impossible at the present time to lay down a definite rule applicable for everybody. We therefore proposed to take power in the Bill to make Orders for preventing the landing of flat fish under certain conditions.

33. The Board of Agriculture have had considerable experience, have they not, in legislation of this character, by way of Order of the Board, in the matter of the diseases of animals?—That is so, of course.

34. And can you shortly say how that has been received by the community mainly affected, namely, the agriculturists, and how far it has been the policy of the Board to lead public opinion, but not to force it?—Contagious disease existed in this country for a great number of years, and farmers were very much opposed to the thought of restrictions. They had an idea that these diseases were more or less a matter of providential dispensation, and they certainly resented any idea of measures being taken to prevent spreading those diseases. If I may refer to the case of Foot and Mouth Disease, that disease certainly existed in the country for a period of about 32 years, from 1839 to 1871, and no effort was made to stop its spread. Indeed, when suggestions were made that the spread might be stopped by means of restrictions, even so recently as the year 1864, the Farmers' Club of London, which is a very representative body, and the Highland Society of Scotland, which voices advanced agricultural opinion, were equally opposed to the thought of restrictions.

35. What is the attitude of agriculturists towards restrictions now?—The attitude of agriculturists now is entirely favourable to restrictions. If I may use the expression, the national attitude of agriculturists at the present moment is entirely in favour of the necessary restrictions. They know that disease may be stamped out, and we receive from the general body of agriculturists a very general support in the measures we think it necessary to take.

36. And from the experience you have had in dealing with contagious diseases by way of Order of the Boards, do you think we could deal equally well with the question of the capture of undersized fish to the satisfaction of fishermen?—Yes, I do. I think the Board would probably find it necessary always to be a little in advance of public opinion—not too much in advance of public opinion—and we should have gradually to feel our way and to educate those concerned, by proving to them that the restrictions are for their benefit.

37. Then in addition to the various Committees which have inquired into this question of undersized fish, there was one, was there not, called the Committee on Ichthyological Research, which made a recommendation as to testing and

Chairman—continued.

regulating fishing operations, which perhaps you have there and will quote to the Committee?—Yes. That Committee expressed the opinion that in view of the difficulty of carrying out at a reasonable cost any reliable investigations as to the effect of natural causes on the abundance of fish and the danger of drawing inferences from partial results, the effect of man's operations on the fisheries can best be tested by regulating such operations experimentally.

38. And you think that by means of Orders under this Bill, we should be able to test experimentally the operations of fishing?—Yes, I believe that system would secure the necessary elasticity, and would enable us from time to time to take into account the different conditions we had to deal with.

39. That is to say, if at any time you found you had been proceeding on wrong lines and recent investigations showed you that other lines ought to be pursued, it would be in the competence of the Board at any time to alter their Order to meet the new circumstances that had arisen?—That is so.

40. Then what would be the matters which would have to be kept in view in making the orders of the Board with respect to fish and fishing?—One matter which would present itself at the outset would be, of course, the description of fish, the landing of which would be subject to regulation or to prohibition. It is represented to us by the fishing industry that the protection of small plaice is by far the most important subject to them. It might be a question whether we should limit our operations in the first instance to plaice; but there is a considerable body of opinion that such fish as soles, turbot, brill, and fish of that quality are also in need of protection. Proposals have been made to include dabs and flounders and other flat fish, but those fish, I think, have never been included in any Bill. The description of fish to be dealt with is one of the matters in regard to which we should have to feel our way and to act with discretion from time to time.

41. Then the next point would be to consider the size of the fish, would it not?—Yes. There again, I think, we should need to proceed experimentally. The problem, of course, would be to insure the maximum amount of security for undersized fish with the minimum amount of inconvenience or even loss to the interests concerned.

42. And it would a great deal depend upon the places where these fish were caught as to what the size limit would be. If, for instance, any restrictions were placed on catching fish round the coast, you would naturally require to have a very much lower size limit than you would if it was confined to the large nurseries in the North Sea?—That is so.

43. And it was in view of that that the sizes in the Bill of 1900 were fixed, because it was anticipated of course that they would be applicable to all fish caught anywhere?—Yes; the Bill of 1900 laid down an absolute prohibition against the landing and sale of all flat fish under
a certain

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SIR THOMAS ELLIOTT, K.C.B.

[Continued.]

Chairman—continued.

a certain size wherever caught and under whatever conditions they were caught.

44. Whereas under the Bill as now before the House those limits might be varied in accordance with the places where it is expected the fish would be taken?—Yes. If I may be allowed to say so the idea was that it is not necessary, in order to protect the small fish in what are known as the eastern grounds, to penalise the boy who catches a small fish from the pier head.

45. Then that would be best attained, would it not, by deciding what class of vessels should be prohibited from landing undersized flat fish?—Yes. The vessels we should have to deal with in the first place would be the great steam trawlers and the carriers which bring the fish from the trawling fleets to markets in this country, which, by resorting to the so-called nursery grounds, are undoubtedly productive of a great deal of damage.

46. If those vessels no longer captured undersized fish, at any rate a very large number of the total catch brought now to these islands would be returned to the sea?—Yes.

47. And possibly would not be caught at all?—I think they would not be caught at all; the object is to prevent these great trawling steamers from resorting to grounds where small fish are very abundant.

48. And while on the one hand the owners of a certain class of vessels would not wish to be interfered with in catching small fish near the coasts of England, is it not the general desire of the owners of steam trawlers and carriers to which you just referred, that some steps should be taken to prevent them in their own interests from catching these undersized fish?—Yes; there is a very remarkable public opinion amongst the representatives of the great trawling industry on that point; they are firm believers in the advantages of protecting these so-called nursery grounds.

49. Then there will be another important consideration, of course, in making Orders under the Bill, and that is, as to the period of the year to which they should be applicable. Is there a period of the year during which undersized flat fish are landed in much larger numbers than at other periods of the year?—Yes. I think that by prohibiting the landing of fish within the months, say, of March or April to June or July, we should deal with the greater part of the evil. We do not hope for perfection, but we should be able to deal with the greater proportion of the evil as it were.

50. It would obviously be a hardship to our own fishermen if while they or any of them were prohibited from landing undersized fish in this country, foreign vessels, which could not be prevented from fishing on these grounds, were allowed to land undersized fish in England?—The Bill, of course, would apply equally to small fish landed from foreign vessels as to vessels belonging to our own country.

51. And it would be within the competence of the Board to make an Order prohibiting the landing of undersized flat fish from foreign

Chairman—continued.

vessels of any size?—Yes; under the Bill as it stands we have absolute discretion in that respect.

52. I think it is desirable that the Committee should have before it all the information that can be handed in. I will not examine you upon it, but perhaps you will hand in what statistics we have obtained of the catch of undersized fish, the vessels engaged in the trade, and the volume of imports of fish into this country?—Yes, I have a number of statistical tables here, which I will hand in to your Lordship's Committee for printing.

53. Then there is only one other part of the Bill upon which I think I need ask you to give the Committee your opinion, and that is the clause which provides that the same powers shall be given to the Board of Agriculture and Fisheries within territorial waters for the making of bye-laws which are now in possession of the Fishery Committees round the coast. The whole coast is not under Fishery Committees, is it?—The whole coast is not as yet under Fishery Committees; there are two somewhat serious gaps, one on the east coast and one on the west coast.

54. Roughly speaking, shall I be correct in saying that trawling by steam trawlers is practically prohibited within the area of all the district committees?—To a considerable extent.

55. Will you hand in a copy of the bye-laws of the different Fishery Committees within their respective districts, and can you furnish the Committee with a map showing what those districts are?—Yes; I have here a statement showing the bye-laws affecting trawling fishing made under the Sea Fisheries Regulation Act, and maps have been prepared which will be at the disposal of your Lordships.

56. And you will also furnish us with the correspondence which has recently taken place, both as to the laws in foreign countries and as to the amount of market that there is for undersized fish in countries other than England?—Yes, I shall be able to submit some information under those heads to the Committee.

Duke of Abercorn.

57. Where are those places you mentioned on the east and west coast, where the fishery laws are not put into operation?—One is in the southern part of Norfolk and the northern part of Suffolk, including Yarmouth and Lowestoft, and the other is a portion of the Bristol Channel.

58. The big steam trawlers capture a large amount of undersized fish, do they not?—They do so when they resort to particular grounds. The proportion of course varies.

59. Would those grounds be in the North Sea chiefly, or would they also be round our own coasts?—Wherever you have shallow water suitable for the development of fish, you have of course the danger of taking large quantities of small fish.

60. I believe I am right in saying that these small fish are always dead before they are taken on board, owing to the pressure and want of air?

—That

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SIR THOMAS ELLIOTT, K.C.B.

[Continued.]

Duke of Abercorn—continued.

—That is a question upon which a good deal of difference of scientific and practical opinion exists, but it is undoubtedly the fact that a considerable proportion of the fish taken up are not returned promptly enough to the sea to give them a chance of life.

Marquess of Huntly.

61. I understood you to say that it would not be fair to our own trawlers if foreigners were still to fish on these banks at a time when our trawlers were not using them. Do you contemplate that other countries would make similar regulations so as to prevent the sale in those countries of these undersized fish?—I think there is very good reason to hope now that other countries would follow our lead in this matter. But I may say with regard to that that important resolutions were arrived at by the International Conference which sat at Hamburg a few days ago. My colleague, Mr. Archer, attended that conference and will be able to give your Lordships direct information as to the resolutions the Conference arrived at.

62. It would be a great grievance, of course, if our trawlers were barred during those months, which I understand are March, April, May, June and July, and foreigners were still allowed to go indiscriminately?—The foreign trawling industry is very small indeed as compared with ours. We undoubtedly should direct our efforts to getting foreign countries with their small trawling fleets to do what we are proposing to do with regard to our great trawling fleet. The representatives of the trawling industry in this country do not suggest that there would be any material hardship.

63. Then I want to ask you about Clause 2 of the Bill, which proposes to put under the Board of Agriculture and Fisheries the powers which under the Sea Fisheries Regulation Act, Section 2, are with the local fisheries committees. Do you apprehend that there may be any clashing between the Orders that would be issued by the Board of Agriculture and, perhaps, orders that would be issued by the local fishery committee?—I do not think so. We should be able to deal with the cases in which there are no sea fishery committees, and it is also conceivable that, in concert with the local fisheries committees, we might be able to make identical regulations with regard to nursery grounds which extend somewhat beyond the territorial waters. We have been told by the Lancashire Fisheries Committee that they would welcome an extension of the power to make bye-laws to nursery grounds which are outside the territorial waters. It is also conceivable that some of the local fishery committees may not take a sufficiently wide view of this question and that their action might be detrimental to other parts of the coast. We want, in fact, to be placed in the same position as the Scottish Fishery Board and as the Irish Department of Agriculture.

64. Then does this clause as it stands give you power to supersede the local fishery committee if you wished to?—It would give us an inde-

Marquess of Huntly—continued.

pendent power, undoubtedly, but it would not be the power of supersession. We have the same power with regard to diseases of animals. Sometimes a local authority is, perhaps, guided too much by purely local considerations, and it is desirable in that case that there should be an authority which is able to take a somewhat wider view of the matter. But, of course, we avoid conflict with the local authority if we possibly can.

65. As a matter of fact, in these local fisheries committees their powers under this section have been curtailed by the action of the members of the Council who represent the inland sections, and they have not been able to do the work so thoroughly or issue bye-laws in such a thorough manner as those who represent the coast divisions would wish?—I should quite concur in the view your Lordship has expressed. It very often happens that a local authority is unable for local reasons to do exactly what it thinks desirable, and is rather glad to shelter itself under the central authority.

66. Then do you think it is quite clear under this clause that the Board of Agriculture and Fisheries would have the power to step in and make bye-laws which would supersede—I do not know whether that is the right word, but would be authoritative over the head of the bye laws issued by the local fisheries committees?—Yes. The intention of the clause, whatever may be the fault of its drafting, was undoubtedly that we should be in a position to make bye-laws affecting the territorial waters which might be in excess of the bye-laws made by the local authority.

67. And you think this clause gives you that power?—The clause was certainly intended to give us that power. I think it does.

Lord Tweedmouth.] As I understand, the intention is that the Board of Agriculture should have power from time to time to vary the size limit?—Yes, if they find it to be necessary.

68. And also that they should have different size limits for different fishing grounds?—Yes, that is so, using the term fishing grounds in a very wide sense.

69. I mean the different areas in the North Sea might have different size limits applied to them?—I do not contemplate that. I think that it would be difficult to administer the laws if you had separate size limits for different fishery grounds—at any rate in the North Sea.

70. That was exactly my point. I was going to follow up my question by asking you: do not you anticipate that there would be great difficulties in a variation of size limits?—Yes, I think that the variation of size limit which your Lordship suggested would be extremely difficult to carry out administratively.

71. If that be so, would it not be the wiser course absolutely to fix the size limits in the Bill?—I think not, because it is so difficult to say once and for all what the size limit should be. Our figures go to show that the size limit of plaice at the outset should be either 10 or 11 inches for fish caught by deep sea trawlers in the North Sea nursery grounds. I think that a size limit of 10 inches might be found sufficient

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SIR THOMAS ELLIOTT, K.C.B.

[Continued.]

Marquess of *Huntly*—continued.

sufficient to keep trawlers off those grounds; but it is possible that we might have to make the limit 11 inches, so that if we found that 10 inches did not answer the purpose in view we should alter that limit then to 11 inches. On the contrary we might begin at 11 inches and find it quite safe to reduce the limit from 11 inches to 10 inches.

72. Do not you think it would be better then, to start with, to lay down certain size limits with regard to these various fish, giving the Board of Agriculture power to reduce them afterwards if necessary?

[Chairman.] Or to increase them?

Lord *Tweedmouth*.] No, my idea would be to put it rather high and give the Board power to reduce it afterwards. It does seem to me to be rather giving the Board of Agriculture a blank cheque to do what they like. You say you propose to make certain regulations with regard to size limits, but you do not propose to lay down, to begin with, what those size limits are likely to be?—In a way that is so; and yet I would suggest that the pressure of trade opinion, the pressure of Parliamentary opinion and the pressure of public opinion are quite sufficient, as it were, to write upon your blank cheque "not exceeding so much."

73. Then why not put "not exceeding so much" into the Bill?—Because I do not think that the information at our disposal enables us to do it.

73a. But still it would be an extraordinarily inconvenient thing that this Bill should be passed and you should then fix a limit of some sort, and then a year or two afterwards you should change it again?—If I may say so with great respect, I do not think any such inconvenience or difficulty would arise. We are in very close touch with the trade, the trade are well organised, and have every means of bringing information to our knowledge and pressure to bear upon us; and I think the trade and the Board could settle this matter from time to time in quite a satisfactory way.

74. Then you propose really that these Orders should apply only to certain classes of vessels?—Yes, we could discriminate. That is the whole theory of the Bill, that we could discriminate, for instance, between the deep sea trawlers and the small net fishermen along the shore.

75. But then supposing you were to discriminate in that manner, how would you be able to say that a particular small fish had been caught by a small shore fisherman or by a small trawler round about the shore, and had not been caught by a big trawler?—The bulk of the fish is landed, of course, by carriers at two or three of the great eastern ports; there would be no difficulty there, because the fish is actually landed from the vessels, which we should describe in the Order, and in the event of any attempt at smuggling small fish being made, I think we could deal with it administratively.

Marquess of *Huntly*—continued.

76. But I think the general object is to keep fishing vessels off certain particular areas in the North Sea, particularly on the Dutch and German coasts?—That is certainly the most immediate evil to be grappled with.

77. And you said, and I quite concur, that it is in certain seasons of the year that these small fish are specially found on these beds. Now, have you turned your attention to the idea that it might be possible to prohibit fishing in those particular areas during two, three, or four months in the year altogether?—Yes; we have given very careful consideration to that suggestion, which I think your Lordship has made in Parliament from time to time, but we feel that it would be impossible of enforcement—that we cannot tell with any accuracy whether the fishing fleets and trawlers resort to the prohibited grounds or not. It would require a system of international policing, which I think would be almost impracticable in an area like the North Sea.

78. It would require a convention between the various Powers fishing the North Sea?—I do not think it is so much the non-existence of a convention that would prevent the proposal being adopted, but that the difficulties of policing would be such as to render the proposal impracticable, however cordially the Powers might concur.

79. But it would be perfectly open then to trawlers, under your proposed Bill, to fish in these areas whenever they liked?—Yes, if they found it worth their while to do so.

80. But then has it struck you that it is rather a waste if they go there and fish and catch all these small fish that they should not be able to dispose of them afterwards?—I do not think that they would, in fact, go there. The suggestion is—and figures will be submitted to your Lordships to show—that the value of the small fish that is caught in these grounds is such as to render it no longer worth while for the trawlers to go there if the landing of the small fish is prohibited. They naturally seek profitable grounds, and under our Orders those grounds would cease to be profitable. And in that view we are supported by the trawling industry itself.

81. Would it not be possible, even though you made such a law, to prohibit the landing of these fish here, that they should be able to land them elsewhere?—Our market is so much the best market that I do not think there would be any substantial danger of our regulations being frustrated in that way.

82. Then you propose to apply the Bill to plaice, turbot, brill and soles?—Yes, those are the fish included in the expression "flat fish" in subsection (4).

83. But you do not propose to apply it to dabs?—No, we should not be able to do so under the Bill as it stands.

84. Is it desirable to apply it to dabs at all? Are you aware there are a great number of forms of dabs which are extremely small and which never grow to any size?—If I may refer your Lordship again to the analogy of the Diseases of Animals

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[Continued.]

Marquis of Huntly—continued.

Act, I should quite suppose that if this Bill proves in administration to be successful, a demand might arise for its extension to other fish; but we do not propose at this experimental stage of our action to go beyond the four fish mentioned in the Bill.

85. But the complaint of a diminution of numbers and general scarcity applies to soles quite as much as to plaice, does it not?—I think it does, but the take is not, as I understand, so large or so valuable a take.

86. It is more valuable, a great deal?—Yes, fish for fish; but taking the bulk, I think not.

87. Probably not; but of course it is a much more valuable fish if you take it per pound?—That is so, of course.

Earl of Yarborough.

88. Did you say that practically speaking trawling was prohibited by the Local Fishery Committees?

Chairman]: Steam trawling.

Earl of Yarborough]: Only steam trawling?—Possibly I might read a summary of my statement on that. "The coast line of England and Wales, omitting rivers, estuaries and inlets, may roughly be taken as extending 1,700 miles. Along this trawling is prohibited in territorial waters (a) by all vessels for about 95 miles; (b) by all vessels, with some exception for small boats and shrimpers, for about 280 miles; (c) by steamers for about 880 miles. Trawling is regulated, as to dimensions of net or beam, for about 760 miles.

Lord Heneage.

89. I do not want to ask you many questions because I know you have only recently taken this question up, but I suppose I may take it that the answers you have given to Lord Tweedmouth are the expressions of the opinion which you have come to from what you have investigated during the last nine or ten months, that you have had no practical experience of trawling before that time?—I have never had any practical experience of trawling, but this subject has engaged the very close attention of the Department for the last five months, and constant consultations have taken place between all the officers concerned. I am speaking as the mouthpiece of the Department.

90. That being so I will ask you one or two questions with regard to the evidence that you have already given. You stated that the scientific experts desire more experimental investigation. They are not prepared, are they, to give any decided opinion either as to sizes of fish or the lines to be taken by the Board?—They have all of them, I think without exception, asked for legislation against the capture of undersized fish.

91. Generally?—Generally. There is a difference amongst experts as to the particular (0.10.)

Lord Heneage—continued.

size to be prohibited, and it is to some extent by reason of those differences, and of the fact that as new discoveries are made and new investigations are made, different conclusions may be arrived at, that we ask for somewhat elastic powers in this matter.

92. I am not objecting to your elastic powers, but my point is, do not all the practical fishermen consider that scientific investigations can go on side by side with regulations by the Board?—That is so.

93. And that there is practical unanimity, and always has been, in every one of the conferences since 1888, that the only way to stop the destruction of undersized fish is by prohibiting the sale and landing of fish, excepting with regard to the scientific gentlemen and the long-shore fishermen?—I should say that some discussion has arisen as to whether it is better to prohibit the landing or to prohibit the sale; but that one or other of those courses should be adopted is the practically unanimous opinion of all those who have given attention to this subject.

94. I think the fishing trade gave their unanimous approval to the Bill of Mr. Ritchie, which of course you know, of 1900, did they not?—That was so.

95. And in that Bill the first clause was: "No person shall import, export, buy, sell, expose for sale, consign for sale or have in his possession for sale 'certain fish'?"—That is so.

96. Having regard to that, do not you think it would be advisable that in an enabling Bill of this kind, full powers should be taken, even if in the first instance they were not used?—I think we have taken in this Bill all sufficient powers. The penalty on the sale of fish of particular sizes, wherever caught and however caught, in the Bill of 1900, gave rise to opposition, which the Board of Agriculture regard as a perfectly legitimate opposition. We think that in our Bill we have taken all the necessary powers.

97. But my point is, is it not advisable, when you are passing a Bill, that that Bill should contain every possible power that might be wanted?—I think if we asked for further powers in the direction your Lordship suggests, there would be a danger of our not passing the Bill. We have, I think, included in the Bill all necessary powers, and I think we have not included anything to which exception will seriously be taken by some of those who opposed the Bill of 1900.

98. But you are also aware that whilst the trade give their support to this enabling Bill and have every confidence in the Board, they are unanimously of opinion that the prohibition of landing alone will not stop the catch of these fish effectually?—I was not aware that that had been very seriously discussed. I do not think that the representatives of the trade have brought that criticism under the notice of the Board of Agriculture. There has been, as I have already said, some difference of opinion on the subject, but

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[Continued.]

Lord Heneage—continued.

but we have very carefully examined the question, and we have come to the conclusion that if you prohibited the landing of fish of certain sizes from certain vessels equipped in a certain way, we should be able to secure the object in view.

99. Then you do not think it is advisable to take any powers beyond the powers to prohibit landing?—I think not, and for the reason that Lord Tweedmouth suggested, that when it comes to a question of sale, you cannot discriminate as to the place of capture or method of capture; you cannot say whether the fish has come off a great trawler or, as I said before, has been taken at the pier-head; and that being so, we prefer to tackle the question of landing and to leave the vendors of fish quite alone.

100. I only wanted to put the question on a fair footing. The greater part of the fish which are brought to England from the far North Sea are brought by boats sailing from the Humber ports, are they not?—That is so.

101. If those who own those trawlers there are of opinion that smuggling would take place to a very large extent by the transfer of the fish from one boat to another, would it not be reasonable to suppose that it would be necessary at some future time for the Board of Agriculture and Fisheries to extend their power to sale?—Of course, it is possible that we may be wrong.

102. I only ask you, in the event of their being right?—Yes, that of course would be so.

103. Then is it not advisable to have those powers in the Bill?—I think myself, and it is the deliberate opinion of the Board, that in conjunction with the officers of Customs and other officers mentioned in the Bill, we should be able to prevent any considerable amount of smuggling in that way. A few fish might be landed, but we are not proposing any counsel of perfection in this matter; we wish to secure the substantial protection of these nursery grounds.

104. Then with regard to another question that Lord Tweedmouth asked you, as I understood him, with regard to putting a maximum size in the Bill, are you aware that the trade—you of course have had this evidence before you—are of opinion that nothing would be effectual unless plaice under 11 inches, soles under 10 and turbot and brill under 12, were forbidden?—Yes.

105. They would give power to you to reduce the size, but it is their opinion that unless that was the maximum, or rather I ought perhaps to say the minimum, it would not be effectual.

Lord Tweedmouth.] It is the maximum size not to be landed; it is the minimum size to be taken.

Lord Heneage.

106. Are you aware that that is the general opinion of the trade?—I think that the trade have made as yet no formal representations to us as to the sizes to be taken. They have admitted the desirability of elasticity in the

Lord Heneage—continued.

matter, and the danger of taking any particular size is the danger that was experienced in 1900, that you would frighten some people along the shore, and that you would adopt a compromise which is insufficient to secure the interests of the deep sea fishermen. I think there is a general agreement that the size limits in the Bill of 1900, which were in the nature of a compromise between two interests, are insufficient for the protection of the deep sea people.

107. The sizes in the Bill of 1900 for soles and plaice were 8 inches, and for turbot and brill 10 inches, were they not?—Yes.

108. Therefore this is a larger maximum?—The fact is, of course, that in the Bill of 1900 an attempt was made to apply one fixed rule to very varying conditions and industries.

109. Then I take it you are aware that the trade, whilst desiring to support this Bill as it is, and to give full discretion to the Board, have very fixed ideas as to what will be effectual and what will not?—I think that though the trade are willing to give us a discretion in this matter, they will take very good care to guide the exercise of that discretion—to influence the exercise of it.

110. I will not ask you any more on that question. I only wanted to lay a foundation for the evidence that will come hereafter.

Lord Northbourne.

111. You stated that the legislation which you propose is very much on the same lines as that with regard to the contagious diseases of animals?—That is so.

112. That no doubt now meets with general assent and approval amongst agriculturists; but how is it regarded by consumers?—I may remind your Lordship that at the outset of that legislation, very serious fears were entertained by the consumers as to its effect upon prices. It was stated in the House of Commons that the effect of that legislation would be to raise the price of meat by a sum of about three pence a pound. I think all thought of any result such as that has disappeared long ago, and that consumers as well as producers see that the health of cattle is to the advantage of both parties.

113. What degree of opposition would there be on the part of consumers generally to the proposals in a Bill of this kind?—Some apprehension might be expressed by the consumers with reference to this legislation, just as some apprehensions were expressed in the case of the Contagious Diseases (Animals) Acts; but we feel confident that the final result of measures of this kind would be entirely in the interest of consumers.

114. Of course all legislation of this kind is of a restrictive character, and you must expect, wherever you have restrictions, that you will also have opposition to those restrictions with a view to extension?—The object of restriction being

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being ultimate extension, of course. One of the factors that we are face to face with at the present moment in this matter is the steady increase in the price of fish, and our belief is that if we could protect the small immature fish the final result on the price of fish would be entirely in the interests of the consumers.

115. Would you tell us what is the area of the North Sea fishing ground for that fish?—We have here maps which would show what are known as the eastern grounds; roughly they run down the coast of Jutland, Schleswig and Holstein; they adjoin the eastern shores of the southern part of the North Sea.

116. In square miles do you know what the area is?—I think the area is about 150 miles long by about 40 or 50 miles broad.

117. Reverting to those other questions I asked you, I have been asked to ask you whether there has been any opposition on the part of consumers to the previous Bills that have been produced?—I am not aware of any at all. I think that representatives of the smaller fishermen, who were somewhat alarmed at the measure, said that the consumers would be detrimentally affected; but I do not think that the consumers themselves made any representations.

118. The representations came more from the small fishermen?—Yes.

119. Are those a class of fishermen who you think, as compared with deep sea fishermen, appreciably affect the general supply of fish food to the country?—I think their interest is an important one, and ought to be carefully considered; but, certainly, so far as regards the eastern grounds of the North Sea, it is not necessary to place them under regulations or restrictions of all.

120. Now, supposing this legislation was carried into effect, and that you had a fleet of trawlers from some north-eastern port in England, and that they were prohibited from either the landing or sale of these undersized fish, what would prevent that fleet of trawlers coming out of Dutch or German ports and clearing the ground, and selling the fish in Germany or in Holland?—In the first instance the Dutch and the Danes have not any considerable number of steam trawlers, as I shall be able to show from the figures that have been submitted to your Lordships; and, in the second instance, I think there is a general disposition on the part of the fishing interests in those countries to follow our lead in the matter. What your Lordship points to is a possibility on paper, but I do not think it will work out so in practice.

121. But is there any legislation at the present time in existence, either in Holland or in Germany, which prevents the sale of these undersized fish?—There is legislation in both these countries, the particulars of which will appear in the papers which I submit to your Lordships.

122. And which legislation does not exist in England?—It does not exist in England.

0.10.)

Lord Tweedmouth

123. But that idea of yours of foreign trawler hardly tallies with our experience in the Moray Firth. In the Moray Firth, which is closed to British trawlers, we find an enormous number of trawlers come and fish. If you exclude your British trawlers by these regulations from the eastern grounds of the North Sea, you will find the foreign trawler come in there, just as he comes to the Moray Firth, which is closed to British trawlers?—My great hope is that if this country takes the lead in the matter, we shall be able to influence foreign Governments, who, I think, show a disposition to be influenced in this matter, and that we may get what is a matter of common concern put on a sound footing.

124. But that exactly works round to my original position—that it is necessary to have some convention or agreement with the foreign Powers?—I think we are more likely to get that convention with foreign Powers if we take action in this direction, than in any other way.

Marquess of Huntly.

125. I put that question to you, and I understood you to say that the result of the present conference was favourable to the idea of foreign countries taking that view?—That is so, and in favour of the experimental action that we propose on this Bill.

Chairman.

126. But there are obviously only two markets for undersized flat fish caught by those foreign vessels, one in this country, and one in their own country. By Order of the Board you could prevent the landing of any undersized flat fish from any foreign vessels, and thereby close these markets to them?—That is so.

127. Then, as regards their own markets, most of the countries have already a size limit, have they not?—Yes.

128. And, as a matter of fact, the consumption of small fish is looked upon with very much less favour by Continental nations than it is in England?—That is so.

129. Therefore, practically, the only large market for undersized fish is in England?—Yes.

130. And that you could close to foreign vessels?—That we should, of course, close to foreign vessels.

Duke of Abercorn.

131. Then in that case it would not be to the advantage of an English trawler, supposing he had the means of doing so, to transfer his small fish in the open sea to a foreign trawler?—I do not think there is any practical danger of that, because, as his Lordship in the Chair has pointed out, our market is much the largest market of all, and we should be able to stop the landing of the small fish by the foreign trawler in this country.

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Lord Tweedmouth.

132. How many inspectors do you think would be necessary in order to carry out the inspection of all these boxes of fish that are going to be landed from British and foreign trawlers in British ports?—I think a very small number of inspectors would be requisite, for this reason: that we are not acting in opposition to the trade, but we are acting at the instance of the trade; and we have not got to deal with a body of men who will resist this legislation at every point. We are dealing with a body of men who are asking for it.

Lord Heneage.

133. As a matter of fact the trade want to be protected against this, because no arrangement made between themselves would be binding, being without the force of law?—That is so. We should have a very considerable amount of trade opinion with us, and, in that case, as your Lordship knows, it is much easier to enforce a law than when the opinion of the trade is against you.

134. And those trawlers do as a matter of fact want it, because they know they cannot sell the fish in those markets?—I believe that is so.

135. Is it not the fact that, although there used to be a very considerable trade done by the English fishermen with Germany and France some little time ago, owing to the very high tariff of those countries now there is practically no such trade at all?—I think that is so.

Chairman.

136. I want to ask you one or two questions about the possibility of smuggling. Is it your opinion that the clause as drawn in the Bill, prohibiting the landing from certain vessels, would also cover the landing by other vessels of fish which have been taken at sea from a prohibited vessel?—Yes. We submitted the point definitely to the Parliamentary Counsel, and we were advised that in the drawing of our Orders we should be able to provide against any transshipment of that kind.

137. It was suggested to you, I think by Lord Tweedmouth, that there should be a maximum size limit, and that the only power conferred upon the Board of Agriculture should be a power of reducing that size limit; but, supposing that we took 11 inches, which I think Lord Heneage suggested, as the maximum for plaice, might it not be found that as regards these north-eastern fisheries, from Texel to Horn Reef, even 13 inches would be too small a limit?—That has been suggested by scientific men, of course, and I should be sorry to say that it might not be found necessary. My objection to a maximum limit generally would be that in order to give a reasonable elasticity in cases like those eastern grounds it would have to be so high a maximum that it would be no safeguard to anyone; the small fisherman would be alarmed, and it would be of no value to him at all.

138. As a matter of fact, is it not the case

Chairman—continued.

that the trade which Lord Heneage represents, as the head of the Sea Fisheries Protection Association, has never looked at this question of size except from the point of view of a size which would be applicable to all parties and all places?—That is so; it is a compromise between two entirely different industries.

139. Whereas now we are looking at it under special conditions and in a special manner?—Yes; instead of applying a hard-and-fast line to all fish we want to be in a position to draw a distinction between fish caught in the North Sea by steam trawlers and fish caught in other vessels.

140. You have read, no doubt, the evidence which was given before the former Committees in 1893 and 1900. A certain amount of evidence was given, I think, by those who deal in fried fish, and may therefore be held to represent the consumers. Was their evidence almost entirely in favour of a size limit?—Yes, naturally they wished to get the fish as cheaply as possible, and they were face to face with the steady increase in the price.

141. And, as regards the effect of the Bill upon the fish food of the country, is it not obvious that if a small fish is allowed to live another year he will furnish a much more valuable food supply than if he is captured at an immature age?—Yes. I think one of the great arguments in favour of this Bill is that it would affect the food supply of the people in that way.

142. Then as to whether the penalising should be for landing or for sale, was there not a considerable amount of opposition to the idea of penalising the sale, on behalf of dealers in fish all over the country, who might, perhaps quite unwittingly, be found in possession of undersized fish, for the sale of which there would be a heavy penalty?—That is so. We thought it better to deal with this evil as near the source as we could.

143. Then, of course, if a maximum limit were inserted in the Bill, it would be impossible to alter that maximum limit without further recourse to Parliament?—Yes, one of the objects of the Bill is to enable the Orders to be modified from time to time without the great difficulty of passing legislation through Parliament.

144. And Fishery Bills have not been specially happy in the treatment that they have received at the hands of Parliament in the past?—That is perhaps hardly for me to say.

145. The object, then, I gather you to say, of this Bill is that, while it would not stop the capture of undersized fish at all, it will at any rate prevent the destruction of a very large number of undersized flat fish which are at present caught?—That is so. We shall cure a very large percentage of the evil, as it were.

146. The proportion, of course, of undersized flat fish is very large; and is it not the opinion of our experts at the Board of Agriculture and Fisheries that it is not absolutely necessary in the interests of the fishing industry, or in the consumers'

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consumers' interests, that the destruction of every undersized flat fish in the North Sea should be prevented, but only of so large a proportion as may be without injuring the fishing interest?—Yes, we think that although there must necessarily always be some amount of waste, we should yet prevent a very considerable amount of waste.

147. And at the present time is it not the case that the landing of undersized fish is at a very

Chairman—continued.

limited number of ports?—At a very limited number.

Lord Northbourne.

148. What would you call an undersized fish: is it a fish of the size of this envelope or larger?—My colleague, Mr. Archer, has prepared some information as to the weight of fish, which I think will instruct your Lordship upon that point.

The Witness is directed to withdraw.

MR. WALTER ARCHER is called in; and Examined as follows:

Chairman.

149. You are, I think, the Assistant Secretary to the Board of Agriculture and Fisheries?—Yes.

150. And you are specially charged with dealing with the Fishery Department of the Board?—Yes.

151. And before then you were for some time—perhaps you will say how long—in a similar capacity at the Board of Trade?—I was Chief Inspector of Fisheries from 1898.

152. I need not take you over the ground which has been already covered by Sir Thomas Elliott. I imagine you agree with him that there is an urgent and vital need for protecting undersized flat fish?—Yes.

153. Can you state to the Committee what is the quantity of small fish which are landed at the principal ports on the east coast, and what those ports are?—I have prepared a table showing the quantities of fish landed during the first 12 months for which we have statistics from all ports; that is from October, 1902, to September, 1903, inclusive. In that year 262,990 cwts. of small plaice were landed at the 11 principal trawling ports on the east coast, out of a total catch of 3,320,096 cwts. The ports referred to are the trawling ports of the east coast of England.

154. Which are the principal ports out of those 11, and what is the proportion at those ports?—The principal ports at which small plaice are landed are London and Grimsby, and the proportion landed at these ports represents 74 per cent. of the whole.

155. What is the average weight of small plaice?—I have prepared a table showing the average weight of small plaice from 7 to 14 inches brought into Billingsgate Market (*handing in the table*).

156. What is the average weight of plaice between 9 and 10 inches?—Only $4\frac{1}{2}$ ozs.

157. And between 10 and 11 inches?— $6\frac{1}{2}$ ozs., and I shall show later on that it is at these sizes that the greatest destruction takes place.

158. Lord Heneage suggests that in addition to London and Grimsby a very large proportion are landed at Hull?—The quantity of small plaice landed at Hull was only 8,103 cwts.

Chairman—continued.

The Hull steamers bring their fish to London. There are three fleets which fish from Hull and send their fish by carrier direct to the London market. The quantity landed in London was 126,743 cwts., and in Grimsby 67,621 cwts.

Lord Tweedmouth.

159. Can you tell us what the total weight of plaice caught was during that same year, in order that we may see what proportion of small plaice there is to the total catch of plaice?—The total quantity of all plaice landed in 1903 was 887,599 cwts.

Marquess of Huntly.

160. Of that about a third is small?—Yes, that is to say the quantity landed at the East Coast trawling ports is about a third of the total quantity of all plaice landed in England and Wales.

Chairman.

161. Therefore, London presents the most interesting field of investigation as to the landing of small plaice, and I think you have devoted some attention during the last few months to enquiring into that question; perhaps you can state to the Committee what the result has been?—The small plaice landed in London present exceptional opportunities for study, seeing that they are landed by three carriers which serve certain Hull fleets fishing in the North Sea. These carriers bring the fish direct to the London market, and the managing owners of these fleets have been good enough to supply us direct with statistics showing the quantity of fish landed daily and the place where they were boarded; so that with regard to these fish we have been able to learn not only what quantity were landed, but also where they come from.

162. And have you divided them into three sizes?—They are sold in the market as large, medium and small, and are so distinguished in the returns we receive.

163. Will you hand in any tables you may have dealing with that, and state the general result?—From these Returns a table has been prepared showing the quantity of small plaice landed

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Mr. WALTER ARCHER.

[Continued.]

Chairman—continued.

landed in each month from March, 1902, to December, 1903; and it will be seen from this Table that the occurrence of boxes of small plaice on the London markets dates practically from March to October, and that they are most prevalent from April to July inclusive, the quantity landed in those months being 80.6 per cent. of the catch of the first complete year for which figures are available.

164. And where are they caught?—173,693 cwts. of that quantity were caught off the Danish coast east of longitude 7°30, south of latitude 56 and north of latitude 53°30, that is to say, in the area in which it was agreed at the conference of the trawl fishing industry in 1890 not to fish, and which is now generally known as the eastern grounds. Your Lordships will be able to follow this upon the map which is now produced.

165. The white is sea, and the dark shading is land?—Yes, it is a chart.

166. Will you put your finger on Heligoland?—It is just *here* (*pointing out the same*).

167. The area in question is really all the sea round about Heligoland?—Yes, principally between Heligoland and the Horn Reef.

168. Then what proportion of the total catch was represented by small plaice during those months?—76 per cent. of the total catch, or if each year between, separately, the proportions are 82 per cent. in 1902 and 67 per cent. in 1903.

169. Will you now, please, describe briefly to the Committee how you took these observations as regards the size; I mean to say how you averaged it; because, of course, you did not examine every fish that came, you examined certain boxes and from those you deducted the average?—To determine this, 149 boxes of small plaice were bought in the open market on 41 different occasions, spread over a period from the 17th of April to the 11th of June, 1903, and 41,484 were measured and tabulated. I may say that the constituent elements of the boxes grouped together in various ways showed a great uniformity, and may be taken to represent, with a considerable degree of accuracy, the proportions obtained throughout the entire catch.

170. You have told us what are the numbers; will you tell us something of the value of the small plaice as compared with the total catch?—In 1902 the value of the total catch of the fleets referred to on these grounds was 69,988*l.*, and of the small plaice 50,241*l.*

171. What is the proportion of the value then?—The small plaice represent 71.8 per cent. of the whole.

172. And in 1903?—In 1903 the total value was 62,296*l.*, of which small plaice represented 35,028*l.*, and the proportion of small plaice is, therefore, 56.2 per cent. of the total take.

173. Do you believe from that information which we have obtained, that if a limit of 11 inches below which plaice might not be landed were imposed, the effect would be that it would be unremunerative to fish in those eastern grounds?—Yes, I do. I think we should be within the mark in stating that a limit of 11 inches would make it unremunerative.

Chairman—continued.

174. What is the relative value of the fishing in these eastern grounds, and the fishing elsewhere in the North Sea, and round about the coast?—The fleets from which we have obtained returns were fishing between longitudes 2° and 6° east as well as on the eastern grounds during 1902 and 1903. Upon the map which I have produced, the former area is coloured pink, the latter yellow. In 1902, if 100 be taken to represent the profit per vessel per diem in the pink area, the profit during the same period would be represented by 127 in the yellow area. In 1903 a similar estimate is represented by 100 for the pink area and 70 for the yellow area.

175. What do you deduce from that?—That fishing elsewhere would give a fair profit, and if, therefore, a size limit were imposed, it would reduce the profit of fishing in the eastern grounds, so that the fleets would abstain from fishing there.

176. Therefore you conclude that if the profit were reduced by the imposition of a size limit, it would have the effect of inducing the fleet to abstain from fishing on the yellow ground?—Yes.

177. Will you now give the Committee some information as to the migration westward of small plaice in the summer?—I have prepared maps (*producing the same*) showing the areas fished by the steam fleets to which I have referred. The manuscript figures in each square indicate the percentage by weight borne by small plaice to the total catch. The presence of 0, does not necessarily mean that there were no small plaice, but indicates that the proportion was too small to necessitate the sorting of the catch into large, medium, and small. It will be seen that the destruction of small plaice began in March (in square 38 they formed 94 per cent. of the whole), and it continued on the eastern grounds until July. After this date the small plaice began to move further westward.

178. Then after July do you find that the small plaice are moving westward, and the catch diminishes?—That is so. I may say that in July the fleets were only fishing for about the first 10 days inside the eastern grounds. The 21 per cent., taken in square 38, in August, was all caught outside the area of the eastern grounds, and 15 and 12 per cent. were caught in squares 42 and 43. In September and October they have moved westward into deeper water in square 37. In November, December, January, and February the quantities are not sufficient to necessitate the sorting of the catch into large, medium and small.

Lord Tweedmouth.

179. Are they getting good catches of fish in those squares during those months?—Yes.

Chairman.

180. Therefore the object of the Bill, namely, to prevent the catching of, at any rate, a large proportion of small fish, would be attained if these

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[Continued.]

Chairman—continued.

these ships were debarred in any way from going to those eastern grounds during those particular months?—Yes, the figures, so far as they go at present, seem to show that; the small fish migrate westwards as the season advances, and are no longer congregated in dense masses on the so-called eastern grounds.

181. Now, passing from that for a moment to another subject which was raised by Lord Tweedmouth just now, namely, the position of foreign Powers towards this question, you have recently been, have you not, one of the representatives of this country at the International Conference on the statistics of the North Sea?—On the investigations of the North Sea at Hamburg.

182. And certain resolutions have been passed with regard to that, which I will read to the Committee, and they can be handed in as a part of your evidence?—If you please.

Marquess of *Huntly*.

183. What countries were represented?—All the North Sea countries except France.

Chairman.

184. Were not these two of the Resolutions that were passed: "The Council considers it highly desirable that full and careful statistics be collected at the chief port of entry, on the question of the destruction of small fish, with especial reference to the size, place, and season of capture of young plaice and other flat fish, and desires to bring before the Government concerned the necessity of allocating, out of the funds for fishery research at their disposal, a provision sufficient for the thorough carrying out of this portion of the work"?—Yes.

185. That is to say, continued investigations on lines that you have been first describing to the Committee as having carried out yourself?—Yes.

186. And has not the opinion been expressed through His Majesty's Minister at Copenhagen that more of this statistical information was expected by the Bureau from a country which takes so very large a proportion of the total catch of fish in the North Sea as England?—Yes, it was.

187. And, secondly, did the Council pass this resolution: "The International Council resolves that it is desirable that in the event of a law being passed in Great Britain giving powers to make experiments for restricting the destruction of undersized flat fish, powers be also taken by the various Governments concerned to make experiments for restricting the destruction of undersized flat fish"?—It did.

188. That I may conclude is the indication to which Sir Thomas Elliott alluded, as the direction in which it might now be hoped that foreign countries were moving?—Yes.

189. That is to say, if England takes the initiative, the council will recommend to their respective Governments that they should follow

Chairman—continued.

our example by placing further restrictions in the first instance on the capture of small flat fish?—Yes.

190. What are the countries whose interests are most likely to come into conflict with our own in these fishing grounds?—Germany is the principal country.

191. Why is it more so than other countries? From the information which was put before the International Council last week, it appeared that Germany is almost the only country, besides ourselves, which fishes with steam trawlers on the Eastern grounds. The Dutch fishings are carried on mostly by small sailing vessels along the Dutch coast. In Denmark the fishing is carried on almost exclusively by small sailing trawlers, and plaice, below 9½ inches, may not be sold.

192. Therefore any danger, whatever it may be—I will not go into what the extent of that danger is—of competition by foreign vessels is practically limited to Germany?—That is so.

193. In Holland there is a size limit, is there not?—Yes, of 6½ inches.

194. And in Belgium?—There is a limit there of 7½ inches.

195. And in Germany?—In the North Sea ports of Germany there is a limit of 7½ inches.

196. What is the total number of foreign trawlers fishing from North Sea ports?—It is under 200.

197. How many English trawlers are there?—Last year over 1,200 were fishing from North Sea ports of England.

198. Can you hand in a table from two of the four principal fishing ports of Germany, Bremerhaven and Geestmunde, showing the quantity of small plaice landed at those ports?—Yes.

199. What is the proportion as compared with those landed in English ports?—Only 6½ per cent. of those landed at the North Sea ports of England.

200. When you were in Germany did you make some inquiry as to what market there was for small undersized flat fish?—Yes.

201. With what result?—I found that there was no very extensive market there; that the sale of these fish is almost necessarily limited to the large seaports, where it can be brought by sea carriage. Naturally, therefore, England affords the great market for these fish. Altona and Hamburg are possibly the only places which could at all come into competition with us, and even there the amounts would be relatively small.

202. Then is the result of your investigations in that direction to show that if the landing of undersized flat fish were prohibited in England from these places, it would practically not be worth anybody else's while to go and catch them?—Yes, I think so.

203. I should like to ask you what was the result of your conversation and the impression left upon your mind at the conference, as to the attitude of other maritime countries in making further

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[Continued.]

Chairman—continued.

further regulations for restricting the capture of undersized flat fish, in addition to this resolution?—They seemed to be willing to make an experiment such as we are asking power to make, to restrict the capture of undersized flat fish, in order to see whether it would have the effect of increasing the productiveness of the fisheries.

Lord Heneage.

203a. At the present moment the foreign fish is only brought in through their having very low rates to this country, is it not, and therefore if small fish were prohibited they would be unable to sell them anywhere, and it would not be worth their while?—That is what we believe.

204. Then with regard to the belief in the trade that the vessels would not go to what I will call the forbidden grounds, is it not the fact at the present moment there has been a great change, and that all the hands on board the boats are share men, more or less, even including the engineers?—Yes, that is so.

205. Therefore it is to their interest that when the catch comes home it should be sold at the greatest profit?—Yes, quite so.

Lord Tweedmouth.

206. You told us that in Denmark there is a considerable limit, 9 $\frac{3}{4}$ inches?—Yes.

207. Can you tell me how that works?—The restriction in Denmark at the present time is with regard to the sale of fish, and not to the landing. They find some difficulty, therefore, in enforcing the law, as it is found difficult to prove that the fish were intended for sale. I understand that a Bill is now being considered to prohibit landing.

208. Will it not be very difficult for them, with their small boats, to examine all these fish as they are landed there?—I am not sufficiently acquainted with the way in which the Danish fishery is carried on, to be able to answer definitely. But I understand that most fish are landed at Esbjerg. There should, therefore, be no more difficulty there than at our large ports in examining the fish landed.

209. Not even with the small boats which multiplies the number of landings so much?—As I say, I am not sufficiently intimate with the circumstances of the trade on the Danish coast to be able to answer that question definitely.

210. You cannot tell me, then, what precautions they take in Denmark to secure the limit being kept at all. One of the great points of this whole inquiry is, how you are going to enforce what you propose?—It is enforced to a considerable extent by the local inspectors and by the police.

211. Then with regard to other countries, Germany, Holland and Belgium; I suppose you would say the limit there is so low that it is hardly worth considering?—It is too low at the present time.

Lord Tweedmouth—continued.

212. Down to 7·1 in Germany and 6 in Holland and Belgium?—Yes; that is too low.

213. But you do not know anything about the working in those countries?—Yes; we have obtained information from foreign countries, of which an epitome has been handed in. In Belgium they enforce the law rigorously without difficulty and without complaints from fishermen. A number of prosecutions have been instituted in the last twelve years at Furnes and Bruges. In Germany also it is strictly enforced. In Holland the enforcement is difficult if not impossible, and strict observance cannot even be attempted. The same remark applies to the Scheldt and Zealand.

214. In your own opinion, with regard to this country do you think it would be easy to enforce this limit here?—I think it would as regards these vessels which are taking fish in a wholesale manner. We want to prevent the landing of those fish by the million. I made a calculation that something like 50,000,000 were landed between April and July in 1902 and 1903 in London alone; and that is what we wish to prevent.

215. And you do not think there would be any difficulty in enforcing it against one class of fishermen and not against another class?—I should not think so, because it seems to me that in the case of a small man who fishes on the coast the quantity of fish he takes is so small that although it is of great importance to him it would not affect the general question.

216. What do you say to the other objection which is so often raised, that in fishing you cannot avoid the capture of a considerable number of small fish, that whether it is by net or by line you must capture a certain number of small fish, and these small fish, from one reason or another, do not make much of a show if they are thrown back into the water?—I think the answer to that question is that the great capture of small plaice is confined almost entirely to certain areas at certain periods of the year, and that it would not pay the trawlers to go there and fish if they might not land fish under a certain size. The proportion of plaice of all sizes to the total catch in the area coloured pink was, in 1902, only 5·7 by weight, and 12·5 by value; and in 1903 it was 6·5 by weight and 12·3 by value; whereas in corresponding periods on the yellow area the proportion of small plaice alone was in 1902, 82 per cent. by weight, and 72 per cent. in value; and in 1903, 67 per cent. in weight, and 56 per cent. in value. Further, the value per box of plaice from the pink area was 30s. as against 10s. from that coloured yellow, which points to the former being almost entirely large or medium sized plaice.

217. That was not quite the point. My point was this. I wanted your answer to the objection that is raised, that it is a great waste to prohibit the landing, and perhaps the sale, at any rate to hinder the sale of a quantity of small fish which is good food, which at the same time under these new proposals would have to be thrown away?—With great deference, I would, in the first place

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Lord Tweedmouth—continued.

place, submit that a quantity of good food would not be thrown away; I have shown that small plaice of 10 inches in length, weigh only 4½ ounces, and therefore the amount of meat to be found on such a plaice of that size must be very small indeed. In the second place, if small plaice form such a small proportion of fish caught over a large portion of the North Sea, there would be no very great waste. I hope we should in the first place only deal just with those particular areas in which we know small plaice form the great bulk of the catch, and by prohibiting the landing of such fish prevent the vessels from going on to those grounds.

218. That comes back to my first proposition, that it is much simpler to deal with an area rather than with the fish brought in. You localise the position of these small plaice, and, I think, quite rightly. Then, I say, surely it is better to deal with the area rather than with the fisherman, and not directly with the fisherman, but through the particular sort of fish he is going to catch. You are not proposing to prohibit the fisherman from going there if he chooses?—We think that it would be almost impossible to police such a large area as that.

219. But it is only for four months in the year?—Yes. Then, further, the other nations have fishermen who are dependent on catching a small quantity of these fish, and in any regulations we make with them I take it that probably we shall have to consider the interests of their small fishermen in the same way that we shall have to ask them to consider those of ours.

220. Still it would be possible to say that your big trawlers were not to go on to that ground at certain periods of the year?—Yes, but we think it would be difficult to enforce.

Marquess of Huntly.

221. But we have no right to say that; it is not our water; we have no right to say to trawlers that they are not to go there, unless it is under the North Sea Convention?—I think Parliament could have made a law prohibiting our trawlers from going there. Trawlers sail under the British flag in the Moray Firth for instance.

222. Is this within territorial waters?—No, but the Moray Firth is not within territorial waters either.

223. As I understand it, all we could do would be to make regulations as to the landing of fish brought by our own vessels under the British flag; we could not make regulations or pass an Act dealing with seas which are not within the territorial limits of England except by a special Act?—Are you referring to Orders made under this Bill?

224. Or to any Orders given to our trawlers—to any regulation?—An Act of Parliament would no doubt be necessary in order to restrict (0.10.)

Marquess of Huntly—continued.

our trawlers in any way, but I take it that an Act of Parliament could prohibit our trawlers fishing in any waters, and I instance as a case in point the Moray Firth, which contains I fancy an area something like 2,000 square miles, the greater part of which is outside territorial waters and is therefore free to all nations.

225. But that is adjacent to our own coast. That is a different thing to waters adjacent to a foreign country?—I should not have thought in law that it would be held to be so; but I am not a lawyer.

226. Then there is a further point. Surely any regulations that were made dealing with vessels going to a particular part of the North Sea would be subject to the convention of the North Sea Convention?—Yes.

227. If France stands out as she does, there will be no possibility of getting all the countries to agree?—The North Sea Convention does not restrict the places where vessels may fish.

228. But in the case of any regulations that were imposed under the North Sea Convention, each of the countries parties to the North Sea Convention will have to assent to it?—Yes, in any convention.

229. There would not be much chance of getting France to consent to any restriction?—I do not see any reason why France should not consent, the same as these other powers would consent, to experimental regulations with a view of seeing whether we cannot increase the productiveness of the fisheries.

230. I am putting these questions really for the reason of supporting the object of the Bill. You think it would be better to proceed by negotiation experimentally, as proposed, rather than attempting to bring all countries under the same regulation dealing with the North Sea Convention?—I think you will see that this resolution that was passed at the Conference particularly provides that if this Bill becomes law then the International Council consider it desirable that other countries should take powers to make experiments for restriction of the destruction of undersized fish. They make it a first condition that we should take those steps. They consider that we have lagged behind, and that we, as I think has been shown by the figures I have put before you, are the principal offenders. It is for us, therefore, to take the initiative, and that if this Bill becomes law then the resolution which has been passed gives a distinct mandate from the International Council to go to the foreign countries to ask their co-operation in restricting the capture of fish.

231. There is one other point I want to ask you about. By the diagrams you show that even after the month of July there are a certain number of these small plaice caught in the yellow waters?—This chart shows that; because it is divided into squares of a certain size, and the sub-division of the eastern grounds comes up the centre of the square in which small plaice were

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Marquess of Huntly—continued.

were taken. But after the middle of July these fish were caught outside the area coloured yellow.

232. But after that date these grounds are visited, for other fish, by trawlers: you do not mean to prevent them from doing that?—No, certainly not.

233. There will be, even after July, a certain number of small plaice captured; but you would not propose to prohibit that?—No; the quantity captured would be very small; in fact, apparently fishing on those grounds, from a study of the question during these two years, becomes so unremunerative during July that the trawlers leave it; they gradually become fewer and fewer until the last trawlers leave about the middle of July.

234. Then the Order you suggest that the Board should issue would be only limiting it to the period when these young plaice are most prolific there, but withdrawing the prohibition of sale in the later months of the year?—Yes. I think the object of the elasticity of the Bill is to obtain powers which will enable such regulations to be made as investigations show may be required.

Lord Tweedmouth.

235. Then do you really mean to say you intend to allow small plaice to be landed at one period of the year and not at another?—Yes; we want to prevent, in the first place, the wholesale destruction of small plaice. At present we are only beginning this work; we have only carried on investigations for a year and nine months; but as the trade assists us to obtain more and more knowledge as to the places where small plaice congregate, regulations may be made which will meet the difficulty that your Lordship suggests.

Marquess of Huntly.

236. But as the Bill stands, as I read it, although it is proposed to be limited to April, May, June, and the middle of July, you could extend that period if you wished to?—Quite so.

Lord Heneage.

237. There are powers under the Bill to extend it all the year round if required?—Yes.

238. You are only giving an opinion on what the Department at the present moment have in their minds?—Yes, quite so, from the information we have at present to hand, but we hope to extend that information from year to year.

239. As a matter of fact, the fishing in July and August does not pay; is not that so?—Yes, on those eastern grounds.

240. And there has been a movement at the present moment in a large number of ports to get a general arrangement by which one-third of the boats are laid up during those months?—Yes, I understand so.

241. Did I correctly understand you to say

Lord Northbourne.

that there was power to prevent a trawler fishing in any given area at the present time?—No.

Marquess of Huntly.

242. May I ask, has any complaint been made as to the destruction of small halibut?—We have not yet had complaints, neither has the matter yet been investigated.

243. But it is as important a fish almost as plaice, and I am given to understand that there is a great destruction of small halibut?—We hope to investigate these questions in course of time. It is only want of means which at present prevents.

244. As you are including flat fish in the definition, would it not be well to include all the flat fish when you are going to Parliament?

Chairman.

245. If I may interpose, I will ask the Witness a question to bring that out. (*To the Witness.*) There are certain flat fish, are there not, which are very small, but which are fully grown?—Yes.

246. And it would not be desirable to prevent the catching of very small but full grown flat fish?—No, certainly not.

Duke of Abercorn.

247. I think you have already stated that you do not think there would be any market abroad for any of these small fish when they are prohibited from entering this country?—No large market.

248. At Altona or Hamburg?—I do not believe so. I have been making inquiries into it, and so far as I can ascertain there is not at present any large market there. What fresh markets may be developed it is difficult, of course, to say, and one of the objects of the elasticity of this Bill is, that if new markets are developed on the Continent and the regulations are of no use, it will be possible to withdraw them.

249. Because that would very much interfere with the working of this Bill supposing it became law?—Yes.

250. You mentioned the large number of small plaice captured; I do not think you mentioned the number of small, immature soles; have you any statistics about them?—I am sorry to say that our investigations at the present time have not been extended further than to plaice.

251. I believe you are a practical trawler yourself, are you not?—I am not a practical trawler. I have been out on board a trawler.

252. But you must know that there is a vast number of small immature fish killed every time a trawl is drawn up in deep sea fishing, owing to the present smallness of the mesh?—Is that flat fish you are referring to—plaice?

253. Plaice and soles?—Plaice, and soles, and dabs?

254. Yes.—On the contrary, our investigations

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[Continued.]

Duke of Abercorn—continued.

tions rather seem here to show that, fishing out in the North Sea, these small fish are not there in very great numbers. One of the points which have been particularly remarked since these investigations have been started is the absence of small fish over the great central grounds of the North Sea.

255. Then in that case, as regards the North Sea, an increase in size of the mesh would not be necessary, in your opinion?—I look upon it that the difficulty of increasing the size of the mesh is that it works so unequally. A mesh that would be large enough to let through a small plaice would let through a large whiting or haddock.

Chairman

256. I wish to ask you one or two questions arising out of questions asked you by the noble Lords round the table. The reason why you elected to proceed by way of prohibiting landing rather than of prohibiting the area in which fishing should take place is, is it not, because it would be not in any way difficult to carry out the police arrangements preventing landing, whereas the police arrangements to prevent fishing in any given area of the North Sea would be very difficult and very expensive?—Yes, they would; and I understand the Admiralty consider that there would be very great difficulty in carrying out any police arrangements out of sight of land.

257. Then perhaps you will just explain to the Committee the reasons why this particular area that is coloured yellow on your map is found to be so full of undersized fish at a particular period of the year. It is, I believe, is it not, on account of the floating of the spawn in that direction?—The investigations which have been carried out, so far as they go at present, tend to show there is a current setting down the east coast of England and into the bight of Heligoland, carrying with it the floating larvæ and eggs, where no doubt they find suitable conditions, and are therefore produced in great quantities.

258. And if this Bill is successful in preventing the large trawlers from going to those grounds, those small fish as they increase in size will swim out into the deeper parts of the North Sea?—That is what these investigations, so far as they go, seem to show.

Chairman—continued.

259. Then Lord Tweedmouth asked you whether a very great amount of waste would not take place by throwing overboard fish a great part of which were practically dead; but if the result of the Bill is as you anticipate, that these trawlers will not go to those grounds at all, it follows that they will not catch the small fish and will not throw them overboard dead?—No, they will not catch any large quantity of these small fish.

260. Then you were asked whether there might not be some jealousy between one class of fishermen and another class of fishermen; but is it not the case that the particular class against whom, if I may use the expression, this legislation is directed, are precisely the class who are asking to have it imposed upon them?—Yes, that is so.

261. Then I think you were asked by Lord Tweedmouth, with some surprise, why you proposed to prohibit the landing of undersized fish in certain months of the year and not the whole year round. Is it not the case that the object of the Board in passing these Orders is to inflict the smallest possible inconvenience upon the fishing fleet consistent with preserving the majority of undersized fish?—Quite so; and further, our statistics show that the great majority of these fish are captured during these four months.

Lord Hennessy.

262. With regard to the question that Lord Tweedmouth asked you about the waste of fish, at the present moment by far the larger portion of the small fish landed in this country is thrown away for manure, is it not, and therefore is not edible fish at all?—There is a great waste; whether it is sold for manure or what use is made of it we do not know, but we do know that there is a great waste, that at times it commands no price in the market at all.

263. But it is absolutely removed from Billingsgate, is it not, by people in authority, into the country in cartloads?—There was a considerable quantity last summer removed from Billingsgate, and though it was offered to the hospitals, the hospitals would only take it unless it were delivered free. It was not even worth the cost of fetching.

The Witness is directed to withdraw.

After a short adjournment,

Mr. ALEXANDER MILLIKIN is called in; and Examined as follows:—

Chairman.

264. You are connected with the Fishery Board of Scotland, are you not?—Yes.

265. In what capacity?—General inspector.

266. Does your duty take you round the whole coast of Scotland?—Yes.

267. Where is the principal centre of the trawling industry of Scotland?—Aberdeen.

(O 10.)

Chairman—continued.

268. Aberdeen is the principal port of landing?—Yes.

269. Have you any statistics of the fish landed at Aberdeen?—No. Mr. Ingram, who will follow me, has the statistics.

270. Has the area of trawl fishing increased considerably of recent years?—Yes.

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271. Then

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[Continued.]

Chairman—continued.

271. Then is it difficult to compare the statistics of to-day with the statistics of former years on account of the difference in the area over which the trawling operations extend?—I should think it would be.

272. But you can hand in some returns, I suppose?—Mr. Ingram can.

Marquess of Huntly.

273. Who is Mr. Ingram?—Fishery officer of the Aberdeen district.

Chairman.

274. Is the opinion entertained in Aberdeen that the supply of flat fish is not as good as it was in years past?—It is equally as good; the quantity landed is still equal or even increased.

275. But the quantity is not landed from the same area that it was in time past?—No, there is a large increase in the number of fishing vessels also.

276. And in the area that they cover, I presume?—It is widened.

277. Can you tell us at all what number of undersized fish were landed in Aberdeen?—About 20 tons would cover the whole thing in the course of a year.

278. And where do the Aberdeen trawlers go to mostly?—All over the North Sea, Iceland and the Faroes.

279. Do they go to what is known as the North Sea Fishery between the Texel Reef and the Horn Reef?—Yes.

280. Have you read the Bill?—Yes.

281. You observe that the prohibition is not against sale but against the landing of the fish. Do you think that could be carried out at Aberdeen?—It would be a more difficult matter than to prevent the sale.

282. Why would it be more difficult?—If the Bill is to prevent the landing you must search the vessels to see that there is no small fish amongst the catches.

283. But is it necessary to search the vessel? Would it not be sufficient to search the boxes landed from the vessel?—Then they are landed; that is not preventing the landing.

284. But it is not a question absolutely of preventing the landing, is it; it is the inflicting a penalty in the event of landing?—Quite so.

285. That would not be difficult in your opinion, would it?—It would entail considerable difficulty in such a large market if the law is to be carried out.

286. Perhaps you would explain the nature of those difficulties?—There would be no difficulty in the meantime to detect small fish; but if fishermen knew that there was a fine of 5*l*, or whatever you may fix, in front of them, they would naturally conceal those fish. In the meantime there is no concealment.

287. How can you conceal a box of fish that is landed?—They would mix them up with larger fish.

288. Do you know Billingsgate?—Yes.

289. They are landed in boxes there. Is there anything to prevent the Custom House

Chairman—continued.

officers, or any other official who may be appointed for the purpose, from examining a proportion of these boxes, if not the whole?—There is nothing to prevent them.

290. Then if he does that, would he not detect the landing of undersized flat fish?—Yes; but it is the extent of the work—perhaps there are 2,000 or 3,000 boxes to examine at Aberdeen.

Duke of Abercorn.

291. A day?—Yes, a day.

Chairman.

292. Do you think that is more or less than is landed at Billingsgate in a day?—I have no idea of the amount landed in a day at Billingsgate.

293. If you were told that the number of boxes landed at Billingsgate was considerably more than the number of boxes landed at Aberdeen, and that no difficulty was experienced in ascertaining what was the contents of the boxes in Billingsgate, would that modify your opinion at all as to the possibility of carrying out a similar examination in Aberdeen?—I would require to know what was the object of the examination at Aberdeen.

294. For undersized fish, of course?—I cannot see that a single officer could do it effectively.

295. Possibly not, but that is only a question of the requisite number for carrying out the work?—Exactly; it would require a large number.

296. You are aware, of course, that when these boxes are sold—and they are sold with very great rapidity—the intending purchaser examines in a rough and cursory way, but he examines the contents of each box before he bids for it?—Yes.

297. Then is there any greater difficulty on the part of the Custom House office in making a similar examination?—He would have to make a more minute examination.

298. Is there any appreciable sale of small fish in Scotland?—I have already stated that about 20 tons is about the quantity landed every year in Aberdeen.

299. All sold for food?—Yes.

300. None for manure?—Occasionally, when they cannot get any value for them, they have to dispose of them for manure.

301. Have you any knowledge of the extent of the market for undersized fish in other countries besides England?—I have seen fish sold in Germany, small fish; you find them mostly in a great many shop windows, smoked and prepared, or cured.

302. Is there anything like the quantity that is sold in England?—I should say as many.

303. You think there are as many undersized fish sold on the Continent as there are in England?—I think there is a greater demand for them on the Continent than there is in England even.

304. What part of the Continent?—Germany.

305. What

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Mr. ALEXANDER MILLIKIN.

[Continued.]

Chairman—continued.

305. What part of Germany?—Hamburg and Bremen and other large towns.

306. Are you speaking from personal experience?—Yes.

307. You have seen them actually sold in large numbers?—I have seen them exposed for sale in the shop windows.

308. What size have you seen them exposed for sale?—From 4 to 6 or 8 inches in extreme length.

309. Are you aware that in most of the Continental countries there is a size limit?—I am not aware of it.

310. You did not know that there was a size limit?—No.

311. You thought it was just the same as it is in England?—Yes.

312. You may take it from me that there is a limit. You were not aware whether the small fish you have seen sold was in contravention of any law that there may be?—No, I was not. It is several years ago since I saw them.

Duke of Abercorn.

313. When you went abroad did you go in an official capacity?—Yes.

314. As regards the fishery interest, was it?—Cured herring trade.

315. And when you saw these small fish in the various shops, did you have any official information at all as to the number which were imported into Germany?—No, none.

316. Do you think that, if there was a limit put to the importation of undersized fish, say in Scotland or Aberdeen, there would be any market for them elsewhere on the Continent?—There might be, quite possibly.

317. How would that be affected?—If the British trawlers obtained any large quantity of them, and knew they could not land them in this country, they would naturally go to Germany, France, or Denmark and expose them for sale.

318. You know nothing about the foreign tariffs?—Not particularly.

Lord Heneage.] Is not the tariff now in Germany prohibitive of landing any small fish by British vessels?—I do not think so—fresh fish.

319. And is it not also the fact that they now assist fishermen in bringing these small fish to London by a special freight, by Parkeston Quay, Harwich, to London in order to get rid of them? That is a fact—that undersized fish do now come there. You do not know that?—I do not know that there is any duty on fresh fish in Germany.

Duke of Abercorn.

320. You said that 20 tons were landed of undersized fish in Aberdeen. What class of fish does that represent?—Flat fish.

321. But what class of flat fish?—Plaice, dabs and witches.

322. Are there not many soles in Aberdeen?—No.

323. Then you also stated that it would be

Duke of Abercorn—continued.

very difficult to find out if these undersized fish were landed, because they would mix them up with a higher class of fish?—They could do so.

324. Do you think any Aberdeen trawler would do that?—Well, naturally he would do it to avoid a fine of 5*l.* or 10*l.*

325. Surely any Custom House officer, if he opened one of these boxes, would be able to discover if there were small fish amongst them?—There could be a little collusion between buyer and seller if they wanted to allow this small fish to escape or to go undetected.

Marquess of Huntly.

326. How do you account for this very small proportion of 20 tons out of the enormous quantity that is landed in Aberdeen of small fish? Mr. Archer told us that last year at Billingsgate the proportion of small plaice to the total catch was one-third in the summer months. How do you account for the proportion being so small in Aberdeen?—The trawlers do not take them ashore; they throw them overboard, because they often get a very low price for them.

327. Must not that entail an enormous amount of waste?—Yes.

328. No legislation would prevent that, I am afraid?—It would be difficult.

329. Is it not also the fact that the Aberdeen trawlers do not go to this part of the Jutland coast opposite Heligoland so much? They go more north, do they not?—I think that the Aberdeen trawlers would naturally go where they think they can get the best choice or the most valuable choice of fish.

330. Do you know particularly where they do go?—All over from Iceland, the Faroes, away perhaps a couple of hundred miles north of the Shetlands—all over the North Sea. There is no particular place.

331. But I think you know as a fact that this particular part opposite Heligoland of the Jutland coast is not very much frequented by the Aberdeen trawlers?—Just because it does not pay them. I could understand that. They would rather work farther north.

332. And it does not pay them to take these small fish?—Certainly not.

333. To turn to the Bill, do you think that the effect as regards the Aberdeen trawler would be that he would pursue his avocation, and if he had any small fish on board the boat, instead of bringing them to Aberdeen he would rather throw them overboard?—Yes, rather than run any risk of a fine.

Lord Tweedmouth.

334. You are chief inspector for the whole of Scotland?—Yes.

335. Therefore you have a general knowledge of the fishing that goes on all round Scotland?—Yes.

336. Do you think it would be advantageous to the fishings of Scotland that such a provision as is proposed in this Bill should be introduced into

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MR. ALEXANDER MILLIKIN.

[Continued.]

Lord Tweedmouth—continued.

into Scotland, namely, that flat fish below a certain size should not be landed?—Yes, it would be advantageous, but to a very small extent.

337. You do not think it would be the means of saving the lives of many small fish?—A very small proportion.

338. In what way would it be regarded by the fishermen of Scotland?—They would look upon it as a source of irritation.

339. Do you think it would be difficult to induce them to accept such a prohibition legally?—I do not think they would.

340. Do you think they would try to evade it?—They would look upon it as an unnecessary law so far as they were concerned—that it would do so little to carry out the object of the Bill, that is to save alive the young flat fish.

341. Then your opinion is that the object of the Bill being to increase the supply of good marketable flat fish, the provisions of the Bill would not materially assist it?—No, I do not think so.

342. Can you tell me why?—There are several ways I would look at it. In the first place, if you prevent their taking these smaller fish they would direct all their energies to the larger fish, and it is the larger fish that propagates the species—the mature fish.

343. You mean to say they would catch more spawning fish then?—They would try to.

344. Do you think it would be impossible to enforce this prohibition if it was passed into law?—Certainly it would be possible, but at very great expense.

345. Do you think it could be enforced by the fishery officers all round the coast?—If you increased their number three times, they might do it; it just depends upon the number of people to examine these boxes of fish when they are landed.

Lord Heneage.

346. You say that it would cause a great deal of irritation in Scotland if a Bill of this sort was enacted?—Yes, if it was to be carried out.

347. Do you know Mr. Thomas Walker, of Aberdeen?—Yes, I have met Mr. Thomas Walker.

348. He has a very large trade amongst the trawlers, has he not?—He is one of the trawler owners.

349. He is a representative man?—Yes.

350. Would you disagree with him in saying that if foreigners were prevented from landing and selling undersized fish all over this country that would settle the question of their going to catch them, as there would be no market for them?—I do not think that; I do not think it would prevent it.

351. But I suppose he speaks for the trade, does he not?—It would prevent the landing of them, but it would not prevent the catching of them. That is my point.

352. But he says it would prevent the catching.

Lord Northbourne.

353. How long have you been in your present

Lord Northbourne—continued.

office?—Five years: and I was three years assistant inspector.

354. Then you have been eight years at this business?—Yes.

Lord Tweedmouth

355. But before you were assistant inspector you were a fishery officer?—Yes, for 22 years.

Lord Northbourne.

356. Have you observed any diminution in the supply of these fish during the time you have been in your present office?—No, it has always been a steady increase year after year.

357. As regards size, have they become larger?—Not as regards size but quantity.

358. How has the size been affected?—That I would not venture an opinion upon.

359. I suppose if you were to put this Bill into operation you would largely increase the number of your inspectors and your fishery officers?—Yes, to carry out the Bill it would require it.

360. Do you think that would be advantageous for the fishery industry?—No.

Chairman.

361. You have read the Bill?—Yes.

362. Supposing it were passed to-morrow what do you think would be the operative effect of it?—I do not think it would save any flat fish.

363. I want to know what you would have to do in your department. Supposing the Bill were passed to-morrow, what do you imagine would be the executive action that your department would have to take under it?—In the first place there are three distinct particular trawling points in Scotland—Grantor or Newhaven, Dundee, and Aberdeen. I should say you would have to appoint 20 men at least to examine these boxes over these districts, if it is to be done effectively.

364. And from what ships would they be landed?—Trawlers.

365. Steam or sailing?—Steam. We have no sailing trawlers.

366. Do you imagine they would have to examine the fish landed from the smaller fishing vessels?—No.

367. Only from the steam trawlers?—Only from the steam trawlers.

368. Belonging to the companies?—Yes.

369. Do you know what the opinion of the companies is as to this Bill?—I do not.

370. You do not know whether they themselves wish to see the Bill or whether they do not?—I do not know.

371. As a matter of fact do these steam trawlers go to the sea around Heligoland?—It would be difficult to say where they do not go.

372. Have you ever looked at their logs?—No, I have never seen a log.

373. And you do not know as a matter of fact where they do go?—No; but just in general conversation going round the coast I learn generally

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[Continued.]

Chairman—continued.

generally where the fishing operations are carried on.

374. Have you ever heard of them going to the neighbourhood of Heligoland?—Yes.

375. You believe they do go there?—I believe they do.

376. Do you know whether they go there at any particular time of the year, or all the year round?—Any time they think they will get the most catches. It is rather a general answer.

377. But supposing the operations of the Bill were limited to certain months of the year and not to extend to the whole year, would that involve a great expense on the Fishery Board of Scotland in providing inspectors to examine the boxes landed from them?—Yes. It would involve the cost of the operation during the months the law is in operation.

378. And you think the advantages to be derived from the restriction of fishing in those areas would not be sufficiently great to compensate the Board for the necessary expenditure in examining the boxes during the four or five months of the year?—I do not think it would.

379. Upon what do you base the suggestion that 20 men would be required at each port?—Not at each port—altogether.

380. Oh, altogether; I beg your pardon. That would be about seven at each port?—No. I should say, put 12 at Aberdeen and the other eight between the other two places.

381. How many hours in the day is the landing of fish carried on from the carriers?—They may begin at three or four o'clock in the morning, and they must be all landed before eight o'clock.

382. That is five hours a day?—Yes, then the sale begins.

383. Therefore your inspector would only be employed five hours in the day; and what superintending staff have you got now over the landing of the fish?—There are four in Aberdeen.

384. And elsewhere?—There is one for Dundee and Montrose and that part of the coast, and one for Granton and Newhaven.

385. What is the total expense of this supervision by these inspectors?—It would hardly be fair to put it on that supposition, because their other duties come in too. The officers perform the other duties of the district.

386. But I imagine if a man has only got to supervise landing five hours a day, he would have time to devote his attention to other duties?—Yes.

387. Then I ask again, what is the expenditure which the Scottish Fishery Board incurs in the supervision which it at present exercises?—I do not know how I could put it. They do not superintend the landing of fish just now.

388. What are the total aggregate salaries of these gentlemen; can you tell us that, roughly—would it be 100*l.* or 200*l.*?—900*l.*; that is, the cost of these three districts is roughly 900*l.* to 1,000*l.*

389. Do you think that to provide the number you think would be necessary would cost double that, another 900*l.*?—It would cost more I should think. You cannot expect to get men

Chairman—continued.

to devote their whole time, five hours a day, and throw up any other employment.

390. Have you at all calculated what would be the additional expense?—No, I have not.

Duke of Abercorn.

391. You stated, as Lord Onslow has just said, that it would entail considerable expense if this Bill became law, because the Custom House officers or the inspectors would have to inspect every box?—To the fishery officers, if the law is to be carried out effectively.

392. Then you also stated that the law would be evaded in this way—that the trawlers would throw overboard all the small fish?—Rather than incur the penalty.

393. If that were the case, and it became generally known that this was the action of trawlers, surely the inspection would not be so necessary by a larger number of inspectors?—If you take the Custom House officers and smugglers smuggling tobacco coming from foreign countries, if they know that the Custom House officers relaxed their efforts, how much tobacco would be brought in?

394. I am not talking about tobacco?—But it is the same thing.

Lord Tweedmouth.

395. These men you were speaking of are the regular officers of the Board, are they not?—With the addition of two clerks at Aberdeen.

396. The others are the ordinary fishery officers of the Board?—Yes.

397. And their time is already fully occupied?—Yes, their time is fully occupied.

398. They have plenty to do?—Yes.

399. They have particularly to look after all the curing of the white herrings, and branding, and so forth?—Yes.

400. So that they have plenty to do?—Quite enough.

401. You do not think the present staff could take on besides the extra work of inspecting all these boxes?—No, they could not.

Lord Heneage.

402. Evidence has been given to us that it is very well known where the undersized fish are in the North Sea—that has been localised. Are there any other boats excepting the boats of Aberdeen that go into that part of the sea?—I would not venture to say.

Lord Tweedmouth.

403. Are you aware that at certain seasons of the year you get a great quantity of small fish either from St. Andrews Bay or from some of the bays near Aberdeen itself?—Yes, I am quite aware of that.

Chairman.

404. Would you wish Scotland to be exempted from the operations of the Bill?—Just in this way, because I think it can do so little good.

405. You would wish it?—Yes.

The Witness is directed to withdraw.

406. Will

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MR. JAMER INGRAM

MR. JAMES INGRAM is called in; and Examined as follows.—

Chairman.

406. Will you tell us what your position is?—I am a Fishery Officer at Aberdeen.

407. Under the Fishery Board for Scotland?—Yes.

408. You have heard the evidence given by Mr. Millikin?—Yes.

409. Have you anything to add to it?—In some matters I am sorry to say I do not agree with my chief.

410. Perhaps you would state the points upon which you differ from him?—Under existing conditions it would not be very difficult to prevent the sale of undersized flat fish.

411. It is not proposed. The landing is what is proposed to be prevented?—Yes; I quite agree with Mr. Millikin with reference to the landing. In order to ascertain whether there are immature or undersized flat fish in a shot, it is necessary to go on board and turn them all over, and it would be an enormous work in a shot, say, of 10 to 20 tons. If a shot of 5, 10 or 20 tons came in, it would be impossible nearly to detect undersized flat fish in the shot before landing, because they cannot well be examined until laid on the floor of the market.

412. It is not a very difficult operation, is it, to ascertain the contents of a box by putting your hand in and pulling them out?—No, because nearly all the fish landed in Aberdeen Market are classified as to size; that is to say, we have usually three and sometimes five selections in plaice—extra large, large, medium and small, and very small; so that by this classification one can see nearly at a glance what the nature or size of the flat fish is.

413. Has that been going on for long?—Since I have been in Aberdeen, at any rate, and before.

414. Have you the statistics there?—Yes.

415. Will you hand them in?—Relating to what?

416. Relating to the numbers of fish and the various sizes?—I have the quantities of the various kinds of fish landed in 1902.

417. You can tell us the total number landed and divide that total into four classes, if I understand you aright?—There are 33 selections of fish in the market every day; 33 classifications usually, and the statistics show the quantities under the various headings.

418. And are those tables recorded?—Yes.

419. And are available?—The 33 selections have been tabulated only since January of this year; that is to say, haddocks, plaice, witches and megrims were not previously differentiated (as to size) in the official returns.

420. Do you mean to say that flat fish and round fish are all mixed up together?—No; I had better show you the statistics.

421. What is a megrim?—It is a flat fish like a witch. Here, for instance, is a return of the trawl and line fish landed for the year 1902 with the different sizes (*handing in the same*).

Marquess of Huntly.

422. When was this classification commenced?

Marquis of Huntly—continued.

We always put it down in our books to a certain extent, but it was only officially returned from January of this year

Chairman.

423. I see you take the same classification that we have been doing lately; you take large, medium and small of plaice, and you have large and small witches and large and small megrims?—Yes.

424. Then this is available at any rate for 1902?—Yes.

425. This return shows that so far as plaice are concerned the number of undersized, that is to say, of small plaice, is only 1,663 cwt. as against 20,937 cwt. of medium?—But those are not undersized—not many of them are undersized according to the definition.

426. What do you call undersized?—According to the definition given to me, under 8 inches in the case of plaice. All are not under that size.

427. Are they all under 11 inches?—No.

428. What are they under?—I have thought of that, have measured the plaice, and can speak to the sizes.

429. Can you tell us what you understand by these three classifications, large, medium and small?—An extra large plaice would measure from 2 feet to 2½ feet in length; then a large one would be nearly 2 feet; a medium would be 18 to 20 inches, and a small one would be anything from 10 to 15 inches or thereby.

430. What becomes of the interval between 15 and 18 inches: where do you classify them?—Have I left an interval?

431. Yes.—I had better give them again. Extra large from 2 to 2½ feet; large nearly 2 feet; medium 18 to 20 inches, and small would be from 8 to 10 inches.

432. Now we have a larger gap still. What becomes of those between 10 and 18 inches?—They do not, of course, stick to exact measurements; I am only speaking from proximate measures; it is guided by the eye.

433. Then in your own mind you would not put a plaice, if he looked to your eye over 10 inches, into the small class?—No, I daresay it would nearly go into the medium, but it is only regulation by the eye.

434. I do not think I need take you over the ground Mr. Millikin covered except to ask you the question I put to him: have you any knowledge of the feeling of the owners of the large trawlers with regard to the desirability of stopping the catching, if possible, of undersized flat fish?—It has never been a grievance in Aberdeen up to this time, that is to say there has been no excess of small flat fish, and it has never come prominently before the trade, but I know when they have seen these small fish they called them "ivy leaves," as they resembled them. When the buyers even have seen them they have said it was a wrongful and a wasteful thing to catch them.

435. Would you be surprised to hear that the

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Mr. JAMES INGRAM.

[Continued.]

Chairman—continued.

ex-Lord Provost, Mr. Mearns, and Mr. Thomas Walker came as a deputation to the Board of Agriculture and expressed themselves very strongly in favour of a measure to prevent the destruction of undersized flat fish?—I think everybody would agree to that if it could be attained.

436. Your only doubt is whether this Bill will attain it?—That is my fear.

437. What would you prefer then?—To see an international agreement to try to prevent the destruction of them.

438. If you were told that it might be some years before an international agreement could be arrived at, do you think it would be wise to take no steps?—I think it would be wise to take no steps. Why tie our own hands if the foreigners are allowed free scope?

Lord Northbourne.

439. Have you read the Bill?—Yes.

440. What is the penalty in the Bill?—I am sorry I cannot recollect it.

441. It is 20*l.*, I think, for landing a box of undersized flat fish. What would the trawlers of Aberdeen say if they thought they were to be fined 20*l.* for landing a box of undersized fish?—I am sure of this: That if that penalty was once inflicted it would never occur in their case again.

Lord Tweedmouth.

442. Why would it not occur again?—Because they would have had demonstration that the landing of undersized plaice was prohibited, and they would not run the risk of incurring another 20*l.* fine.

443. You think it would be very effective?—I think it would be a deterrent.

444. But would it prevent them from catching the small fish?—No, by no means; they have no option; the fish may come into the net and be afterwards thrown overboard.

445. Then the effect of these prohibitions in your view would not be to save the life of any undersized flat fish at all?—Yes, if there were an international agreement as to prohibition. I wish to show you the record of the catches which contained the largest proportion of small fish that came into Aberdeen last summer. I wish to show you, from the fishing grounds ascertained, that the bulk of these undersized flat fish were caught on the Borkum Flats, Horn Reefs, and Jutland Bank.

446. These are exactly the places that were pointed out to us by Mr. Archer?—If it was known that there was a prohibition as to the landing of under-sized flat fish, the trawlers knowing that the bulk of them are found on those grounds would have no incentive to go there, or if they did go in the hope of getting large round fish and long fish, they would throw the small flat fish overboard and bring in only the larger; but all the same the small ones would have been killed.

447. Then you do not think it would save the life of small fish?—Yes, if there were an international agreement; because the boats would not go so frequently to these particular grounds (0.10.)

Lord Tweedmouth—continued.

448. But supposing it was not an international agreement?—Then I say it would be of no effect, in my opinion.

449. Can you tell us at all what sort of amount of small fish are thrown overboard now by the Aberdeen trawlers?—They do not speak very often as to that.

450. They do not sell them?—No.

451. Does it ever come to your knowledge that line fishermen and herring drift net fishermen find great masses of these small fish floating on the surface?—I never heard of it.

452. I have often been told so?—But a skipper told in the case of one of these catches which contained a large proportion of small fish that he threw overboard thirty baskets of undersized fish on the Borkum Flats.

453. Do you want to put in some of those returns?—Yes, I am quite prepared to put them in.

454. Are there any particular facts that you would give us out of them?—This one refers to the trawl shots or catches; it shows the vessels with the larger proportions of undersized flat fish, such as would be touched by this Bill.

455. Would you hand it in to the Chairman that he may look at it?—Certainly. (*Handing in the same.*)

Marquess of Huntly.

456. Supposing this question was taken up internationally, and all the countries agreed to it, the objection that you think would be held on behalf of Aberdeen trawlers would be done away with, if it was made an international agreement that these breeding grounds should not be touched during the breeding seasons of these small fish?—I think it is the only way to benefit the fisheries, that is, to leave the small ones until they grow to a size that would be more marketable and profitable.

457. Then, following that, let me put this to you. This Bill is an enabling Bill to enable the Board to issue these bye-laws. I do not know whether you are aware of it, but it follows upon a conference which was held in Hamburg between the representatives of the various countries concerned, where it was then felt that England should take the lead in this legislation, and an indication was held out that if England did the other countries might follow. Does not that take away your objection to the Bill? It does not follow, although the Bill passed, that these Orders should be issued at once so as to make them too oppressive; but if it was to be the precursor of legislation which would be acceptable to the other countries concerned, would not that make it more palatable?—Yes, that is really the point I agree upon in reference to the Bill. If there were an international restriction I think it would be of some effect. If not it would be of little benefit.

458. Do you think that if it was made so the Aberdeen trawlers would keep away from these grounds when it is pointed out that these small fish are there in the summer months?—Yes; they do not care about going to the grounds as it is. They go in the hope of getting a large proportion of other kinds. It is too far away, for one thing.

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459.

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Mr. JAMES INGRAM.

[Continued.]

Duke of Abercorn.

459. Perhaps you know that there might be a great deal of difficulty in coming to any international agreement?—Yes, I apprehend there might be.

460. Do you know the amount of trawlers as representing England and the foreign countries?—How many boats in each country, do you mean?

461. Yes.—I think I know approximately the numbers.

462. The number as given in evidence to-day was 1,200 representing Great Britain and Ireland and 200 representing all other countries?—200 for European countries bordering the east coast.

463. That being the case, it strikes me that there might be considerable difficulty in getting all the other five countries to join together in any international agreement when there was such a large preponderance of trawlers representing English steamers?—Yes, I quite agree. The Spaniards, the French and the Belgians are going into trawling very fast, and the French would not, I fear, agree to an international restriction.

464. Now, if this Bill becomes an Act of Parliament, do you think the Aberdeen trawlers would have any other means of getting rid of their small fish?—If there were no prohibition in foreign countries they might land them there. The distance is less from Borkum Flats and Horn Reef.

465. But there is a strong tariff into any other countries; they could not land even?—Not on fresh fish, I think; on salted fish, but not on fresh fish, except in France and Spain.

466. Not in Germany?—No; that is my information.

Lord Hencage.

467. Up to lately there has been a very big trade both with Germany and with France in flat fish?—France has taken a great portion of our small skate of recent years.

468. But now do you know that they are raising a tariff against it?—Yes, I understand so in France.

469. And do you or do you not know that the small fish caught by the German boats are now sent over to England at a reduced freight because they cannot get rid of them in Germany?—I have never heard of that.

470. If that were so, it would alter your opinion?—Yes, that would have a bearing, certainly.

471. You said just now on behalf of the trawlers, that you would object to any legislation unless it was international?—Yes.

472. You do not speak on behalf of the owners of the trawlers in Aberdeen?—I know that they would not personally object, I point out that the landing of immature or flat fish in Aberdeen has never been a grievance; the quantity is very small.

473. In fact it is only of very late years that the Aberdeen boats have gone so far south as are proposed to be the forbidden grounds?—Yes, only of recent years.

Chairman.

474. These tables are rather interesting. I have just looked at the numbers of fish brought from the Borkum Flats, as you called them, what we have been discussing in this Committee as the Eastern fishing grounds. I take the case of the first vessel, the "Drumblade." I do not know quite what these proportions are. I see she landed half large, half—what is that?—Half a cwt.

475. Half a cwt. of large, $3\frac{1}{2}$ of medium, and 94 cwts. of small?—94 cwts. of small.

476. Do you think that vessel would have gone to the Borkum Flats if she could not have landed 94 cwts. of small, and could only have landed the half of large and $3\frac{1}{2}$ of medium?—No. I drew it up to show that that is a prolific ground for that kind of plaice.

477. But you thought they would go to fish on those grounds even if they could not sell those small fish. I ask you, do you not think that a vessel with that catch, half a cwt. large and $3\frac{1}{2}$ medium, would go to those fishing grounds if that was all the catch they could dispose of?—No. In some cases the vessels came home for wages settlement, after they had been landing, perhaps, in Germany for awhile those catches obtained on the Borkum Flats and Horn Reefs.

478. It would not have stopped their coming home even if they could not have brought 94 cwts. of small?—No, they determined to come for settlement.

Lord Tweedmouth.

479. About that 94 cwt., how small would the smallest fish be?—That is a shot or catch of what they call the "ivy leaves."

Chairman.

480. Then we come to the "Loch Ryan." The "Loch Ryan" apparently caught no large and no medium, but 56 cwt. of small?—Yes.

481. Fishing 20 miles N.N.E. of Borkum Flat. Do you think that if they could not have landed those 56 cwts. they would have gone on to those grounds?—They brought them in.

482. But if they could not have landed them do you think they would have gone to that fishing ground?—I think not.

483. Then take the "Balgownie"; she landed, I see, $\frac{1}{4}$ cwt. of large, $4\frac{1}{2}$ cwt. medium and 3 cwt. of small. Do you suppose she made a profitable voyage?—Not at that rate.

484. If she had not caught $16\frac{1}{4}$ cwts. medium of haddocks and 22 cwts. of large, which I imagine she did not catch off that place, she would not have paid expenses?—No. I may say that at that season last year, May and June, round fish were at a low price, and the effort then was to get flat fish; they were the only paying class. Hence the voyages of these ships to Borkum Flats.

485. On the other hand, there were some very profitable voyages carried out 300 miles north-east of Aberdeen and 310 miles east by south-east from Aberdeen, not to these banks at all?—310 miles east by south is much the same ground.

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Mr. JAMES INGRAM.

[Continued.]

Chairman—continued.

486. Much the same as Borkum Flat?—Yes, much the same.

487. They caught large numbers of round fish, cod especially?—Yes, that is what they wanted.

488. Do you think they caught the cod on these banks?—No.

Duke of Abercorn.

489. Would you advocate a larger mesh for trawling?—No, I do not think it would be of much consequence.

Duke of Abercorn—continued.

490. For what reasons?—It cannot always be depended on that the mesh sets square when the operation of trawling is going on.

Lord Tweedmouth.

491. Is it not the fact that a very big mesh often involves a tighter net than a smaller one, that the strain on the net draws the meshes too close together?—I could not speak as to that.

Duke of Abercorn.

492. Would a larger mesh be liable to let out the long fish?—Yes, not the flat fish so much, but the long fish.

The Witness is directed to withdraw.

Ordered: That this Committee be adjourned to to-morrow at Eleven o'clock.

Die Veneris, 4^o Martii 1904.

PRESENT :

Marquess of ABERCORN (Duke of
ABERCORN).
Earl of ONSLOW.
Earl of YARBOROUGH.

Lord MELDRUM (Marquess of HUNTLY).
Lord TWEEDMOUTH.
Lord NORTHBOURNE.
Lord HENEAGE.

THE RIGHT HON. THE EARL OF ONSLOW, G.C.M.G., IN THE CHAIR.

MR. REGINALD MCLEOD, C.B., is called in; and Examined as follows:—

Chairman.

493. I think you are Under Secretary for Scotland?—That is so.

494. And as such you represent the views of your department before the Committee?—I do.

495. You, of course, have seen the Bill that is introduced, and you observe that it is proposed in the Bill to make it applicable to Scotland, subject of course to the variations necessary?—Yes.

496. That has, I believe, the approval of the department?—That is approved by the Secretary for Scotland.

497. We were told yesterday by two witnesses, who came from Scotland, that there was very little landing and sale of undersized flat fish in Scotland, and therefore, I suppose, as a matter of fact, the Bill does not very materially affect Scotland?—I think I may say that, from the information before him, the Secretary for Scotland would not have thought of introducing a Bill similar to this so far as Scotch fishery interests were concerned, but it being introduced

Chairman—continued.

on behalf of English fisheries, he was most desirous to throw no obstacle in the way or to interpose any difficulty in the execution of the arrangements of the Bill. He desired to prevent people taking advantage of the exclusion of Scotland and doing there what the Bill forbids them to do in England. For that reason he desires to give his cordial support to the Bill if it should be approved.

498. Of course it is quite possible that at the present time there may be no material quantity of undersized fish landed in Scotland; but if they were excluded from England it might be worth while landing them in Scotland to bring them across the border back into England?—That is conceivable.

499. That, of course, would defeat the intention of the Bill so far as England was concerned?—That is so.

The Witness is directed to withdraw.

PROFESSOR D'ARCY W. THOMPSON, C.B., is called in; and Examined as follows:—

Chairman.

500. You are, I think, the scientific member of the Scottish Fishery Board?—I am.

501. And you also, I think, represented Great Britain at the recent conference that was held at Hamburg?—Yes, I have done so since the beginning of these conferences at Stockholm in 1899.

502. You have probably read the Bill?—I have.

503. And you see it is proposed to give power to the Board of Agriculture and Fisheries to fix a size limit for certain kinds of flat fish brought into this country in certain classes of vessels. Of course when the Bill passes it will be the duty of the Board to consider what should be the size limit that should be imposed, more particularly in the case of plaice. May I ask if you

Chairman—continued.

have any views as to what would be a proper size limit to impose?—I think that in the meantime about 10 inches would be a suitable size; but there are a great many ways of looking at the size limit, and it is rather a long story to argue at the moment what would be the best under any particular circumstances.

504. Various sizes have been suggested, and no doubt you have considered them all. Perhaps you can say why you would prefer a 10-inch limit to an 8-inch or a 13-inch, all of which have been suggested?—Because I am inclined to think that the most practical way of looking at a size limit is to leave aside biological factors, such, for instance, as the period of maturity, and simply to choose such a size that below it the fish are

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[Continued.]

Chairman—continued.

are very much less valuable than above it, or even practically commercially worthless; and I think that, viz. 10 inches, is the size below which plaice cease to be profitable in the wholesale market.

505. Then, of course, there is also a question which should not be lost sight of, and that is, what would be the action of trawlers of other countries supposing this size limit were imposed. I think there is a size limit, is there not, in many foreign countries?—There is.

506. In Denmark?—In Denmark the size is approximately 10 inches.

507. Therefore if a size limit of 10 inches were fixed in England, all fish over that could be sold in England just as well as they could be in Denmark, and there would be no temptation to take them to Denmark?—Certainly. I may say that in Germany the present size limit is considerably smaller, as it also is in Belgium.

508. But was your experience at the Conference that there was an inclination to raise the size limit if England were to set the example?—Yes, I think on the whole I may say so.

509. I believe as the last witness said, the question is not a very pressing one in Scotland?—No, not at all pressing in regard to plaice.

510. There is not a large demand for small fish?—In the first place our trawlers do not frequent the Eastern grounds where these small fish are especially abundant; in the second place they are excluded from the shallow waters on our own coast where they occur; and in the third place it does not pay to sell in the Aberdeen market or to send from Aberdeen to England fish of that size. We have no market in Aberdeen for plaice under 10 inches.

511. There are small fish of other kinds sold, are there not—round fish—in Scotland?—A great quantity. There are, of course, also a few plaice, but very few. I obtained yesterday in the market two lots of plaice about 10 inches, but there were probably not above one or two stone of such fish in the market out of four or five tons of plaice.

512. There are small haddocks sold in Scotland, are there not?—Yes; we have, unfortunately, a very large number of small haddock, of which a great quantity are wasted. We have had this year a very exceptional number—quite a glut of small haddock. I have here the statistics of the numbers that have been sent in recent months to the manure works.

513. Can you give us the quantity?—Of haddock (or mostly haddock), in May, 240 cwts.; in June, 1,598 cwts.; in July, 2,479 cwts. A total from May to November of 8,000 cwts. were destroyed as worthless.

514. Have any proposals been made to deal with undersized round fish as well as undersized flat fish?—There have been no proposals that I am aware of in the way of legislation.

515. Perhaps there has not been the same diminution in the numbers, or rather I should say the same belief that there is a diminution in the numbers of round fish as there is of a diminution in the numbers of flat fish?—Not to the same extent. And I, for my own part, see no evidence of diminution of round fish; but, on the other hand, the salesmen are quite alive to the fact that this great glut of small haddocks,

Chairman—continued.

if not disastrous to the fishings, is disastrous to the market. It lowers prices all round, and has done a great deal of injury, especially this year, when they have been unusually abundant.

516. Would that be equally applicable in a market where there was a large quantity of small flat fish?—I believe so. I am pretty sure of it.

517. It is very difficult, I know, to arrive at any sound conclusion, but can you at all say how far the general assertion that our fisheries are being depleted is correct?—It is exceedingly hard to get at statistical evidence to that effect. On the whole I think it impossible to answer the question; it is a question that should be divided into specific queries in regard to each particular fish. There are some in which the evidence is more or less strong; there are others in regard to which we have none at all.

518. The number of trawlers has increased very largely of recent years?—Very largely.

519. And the area trawled has increased?—Yes, immensely.

520. And engines used have been more efficient; the otter trawl is a more efficient instrument than the beam trawl?—The otter trawl is on the whole a more efficient instrument, but not necessarily more efficient for flat fish.

521. What I rather meant was that under those changed circumstances is it not very difficult to compare the catch to-day with the catch 10, 15, or 20 years ago?—It is exceedingly difficult.

522. Have you ever made any calculation as to the quantities formerly caught by the old sailing trawlers, and the increased capability of the steam trawlers?—No, I have not studied that question; we have no sailing trawlers in Scotland, at least, not on the East Coast.

523. Not now, but you had, had you not?—Never to any extent.

524. There were in England. Then it has been stated that, supposing this Bill comes into operation, the only effect will be that a large number of fish which are now brought to land and sold would, on account of their small size, be thrown overboard, and having been out of the water for a long time, and choked with mud and sand in the trawl net, they would simply be wasted, because instead of living to propagate their species or grow larger, they would all die and foul the ground at the bottom of the sea. Is that your opinion?—There, again, there is an immense difference between one fish and another. I believe if there be one fish that can be thrown overboard without injury, that one fish comes aboard the trawler uninjured and may be thrown out again with a fair chance of its survival, it is the plaice. It is a fish of exceptional vitality.

525. Have you ever made any practical experiments to demonstrate that?—Yes, we have made some. There were some made by the Scottish Fishery Board under Dr. Fulton's supervision in the year 1890, with some interesting results.

526. Can you say what those results were?—It was found on that occasion that after trawling on an average for the usual length of time during which the commercial trawl is kept down, say, from three to four hours, of the round fish about

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[Continued.]

Chairman—continued

22·6 per cent. were dead, and of the flat fish only 3·8 per cent. were dead. The death rate among plaice, of which more than 4,000 were taken, was only 0·12 per cent., or 12 fish in 10,000. We trawled yesterday morning, in order to get a fresh and recent experience, outside the Firth of Forth: and found there that after a haul of two hours the cod and haddock were lively on being measured at least one hour after hauling, and the whole of the flat fish were also alive, at the end of the hour. I may say that these plaice which were caught at 10 o'clock yesterday morning were also alive and well at 10 o'clock last night.

527. After being 12 hours out of the water?—After being 12 hours out of the water. Moreover it is the custom abroad to send plaice very long distances out of water. They are frequently sent from Frederikshavn, in Denmark, to Copenhagen alive, out of water, and transferred to tubs in the market there. They are sent in like manner from Cuxhaven to Hamburg, and there transferred to tubs in the market; and I have even been informed, though I have never seen it myself, that they are sent as far as from Copenhagen to Stockholm.

528. You have been on board trawlers when they have been trawling?—Yes.

529. What is the average time that the fish would be out of water before being returned to the water, supposing the fishermen did not think it worth while packing them in the trunks?—That again is a difficult question to answer, because it depends so much upon the circumstances of the ground and the kind of fish that are being caught.

530. Would they ever be 12 hours out of water?—By no means. When large numbers of haddock are being caught the fishermen will probably take time to gut and clean all these fish; but with plaice that operation has not to be performed, and therefore the fish ought to be returned promptly. I may say further, that I have consulted Dr. C. J. G. Peterson, the great Danish authority on plaice, who tells me that the plaice caught by the Danish fishermen are invariably alive when caught. The parallel is not close with our case, because these plaice are caught by seine nets: but at the same time he says that in all his trawling experiments on board the experimental ship the same result occurs; the plaice come into the boat alive. And he further distinctly says that he bases his whole views of the general question upon the great probability of the plaice being alive when caught and fit to be returned alive to the water.

531. Therefore, even supposing that the imposition of a size limit did not have the effect which many people anticipate, of preventing the trawlers from going to these eastern grounds at all, if they knew that they could not land these fish and could not sell them, they would throw them back into the sea, and the probability is that a very large proportion of them would live?—That is my personal belief; but, of course, a great deal would depend upon reasonable care being taken by the men.

Lord Tweedmouth.

532. Have you separated your observations on

Lord Tweedmouth—continued.

this matter with regard to the smaller kind of plaice as against the larger; do the very small plaice have the same amount of vitality as the larger ones?—I am not prepared to answer that question in detail. On the whole they have not, I believe; they have rather less vitality than the large ones, undoubtedly, but I do not think to a very great extent of difference.

533. But your experience is rather with what one may call the commercial sized plaice than with the very small ones?—That is so. In these further experiments of Dr. Fulton's, on which Dr. Fulton will be able to give you more information than I can, he found that of the immature plaice 0·18 per cent. were found dead as against 0·12 as regards the total; so that the difference was not very great.

534. And also, I suppose, you are aware that very often the trawl is down much longer than three or four hours?—I am aware that it is so in England; but not very much longer as a rule with our Scottish fishing.

535. That is the difference between sail and steam trawlers?—Very probably. I may say, also, that one witness in connection with the Sea Fisheries Bill in 1900 admitted that this particular ground that we are speaking of was favourable in this respect. Mr. Charles Hellyer said, "On this ground a fair proportion are alive when they are brought in," although as a general rule he was arguing against a large number being alive.

Chairman.

536. Are you speaking of the eastern grounds?—Yes.

537. It is obviously in the interests of the fishing trade, is it not, that these young fish should be allowed to grow larger?—Very greatly so.

538. Therefore one might reasonably expect them to take some precautions to see that they were returned to the water as quickly as possible after they were hauled up on board?—That would certainly be my view.

539. When you were in Germany recently did you make any inquiries as to the prospects of a market abroad for these undersized fish if they were prohibited from coming in here?—I did not make specific inquiries on those lines, but I am convinced that there is a large market abroad, in some cases for fishes below these limits, and in all cases for fish very slightly above. While we get very few of these small fish in Aberdeen, we occasionally hear reports from captains who have landed such fish abroad. For instance, a few months ago a skipper informed us that he had landed at Ymuiden, in Holland, a cargo of the very smallest size of plaice, which fetched there 10s. a hundredweight, but which in Aberdeen would only have been worth, perhaps, from 2s. to 4s.; and he explained further the use that was made of them in Holland.

540. Would even ten shillings a cwt. be a remunerative price?—I should think so, considering that he probably got these in great abundance, and had a very short distance to take them.

541. What would be the average value of a trunk

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[Continued.]

Chairman—continued.

trunk of a cwt. of good-sized plaice?—I think the average in Aberdeen for the past year has been about 34s.

542. It would be less than one-third of what he would have got for fair-sized fish?—Certainly.

543. Is there a limit of size in Holland?—I believe not. There is in Belgium.

544. But in Germany is there a limit also?—Yes, there is a limit of 25 centimetres, at Hamburg, or about 5½ inches.

545. That is scarcely worth much?—It is very small.

Duke of Abercorn.

546. And in Belgium?—There is the same limit.

Lord Tweedmouth.

547. Is it not 6·1?—I was wrong; it is over 7 inches. I am told that in Hamburg there is now a limit for plaice of 25 centimetres or 10 inches.

Chairman.

548. In view of what might be the result of imposing a size limit in England being somewhat problematical and hypothetical, is it in your opinion better that you should have elastic powers of altering the size limit, or do you think it would be better to have a definite size limit laid down in an Act of Parliament, which could not be altered except by another Act of Parliament?—I am hardly prepared to answer that question.

549. You admit, however, perhaps, that the matter is even now more or less in an experimental stage?—I do.

550. And that therefore Parliament might easily make a great mistake by fixing any particular limit, according to the information which we at present have before us?—Yes. I think in the fixing of a limit a very great many things have to be taken into consideration, and a great variety of different results, both biological and commercial, may follow: and so far I agree that it is an experimental measure and should be treated as such.

551. You are familiar, I have no doubt, with the trawling industry in Aberdeen?—I am.

552. Are you aware of the views which they entertain upon this question?—The trawlers are favourable to this Bill; they sympathise with their fellows in England in regard to the exclusion of small fish; but, as I have said before, the question of small plaice does not arise in our market.

553. But do not the Aberdeen trawlers land some of their fish in England?—They do.

554. And some of them go to these eastern grounds, do they not?—We hardly hear of any. Only two or three trawlers a year with us land fish from the eastern grounds, and of those that land the fish elsewhere I have no information.

555. Is the Aberdeen trawling industry increasing?—It has increased until within the last year, but this last year has been a very unprofitable one, and I do not think that the industry will be found to increase very much for a few years to come.

556. Is there any other point which to you wish to call the attention of the Committee?—I do not think so.

Lord Northbourne.

557. I take it that you have read the Bill?—I have.

558. You approve of the Bill?—I do.

559. All these measures are, to some extent penal; what do you think would be the general impression caused by the penalties inflicted under the Bill?—I should think the penalties are reasonable, and necessary if the objects of the Bill are to be attained. I do not see that anyone would have great cause to grumble at the imposition of a penalty.

560. You do not think they would consider it a restriction upon their fishing rights?—I do not think so. So far as I am aware the whole opinion of the trawling community is in favour of keeping out these small fish, and, as I think I said before, not only because of the probable beneficial effect on the fishing grounds, but also in order to steady the market and avoid gluts of small fish.

561. Do you think that result would be obtained merely by legislation in England without some international agreement?—At present the English trawling is so very great in proportion and the number of English boats that go to these eastern grounds is so great, that I think a certain amount of good would be done. The one country of any importance that stands out at present from an agreement is Germany, and I think there is good reason to believe that if a reasonable and moderate size limit were imposed, Germany would be inclined to follow suit. As things stand at present, Germany is in advance of us, having a size limit (though a low one), while we have none.

562. I am inclined to think it must have been a mistake when, I think it was Mr. Millikin in his evidence yesterday, said that there were not more than 20 tons of these undersized flat fish in the port of Aberdeen a year?—On the contrary, I should think it was an overstatement. I do not think there are as many as 20 tons. We had yesterday difficulty in finding a couple of stone of them.

563. Then if the amount is so small what is the object of legislation?—Because in Grimsby and Hull the matter is totally different. I never understood this small fish difficulty until I visited the ports of Grimsby and Hull, and saw these fish in hundreds of boxes. In Aberdeen I had never seen them before.

564. Then you think that these restrictions would have an indirect advantage which would affect Aberdeen?—I think for direct advantage we really stand out of the case; it is not our trade; but we sympathise with the very reasonable desire of the Grimsby people to put an end to what is obviously objectionable, and with the hope also of ulterior benefit probable to the general fishery.

565. To what depth do they trawl from Aberdeen; how many fathoms do they go down?—We may say roughly that 100 fathoms is the limit of practicability, and very seldom do they trawl below 70 fathoms.

566. And is the trawling which is carried on by the Aberdeen fishermen at a greater depth than that carried on by the Grimsby and Hull fishermen?—The Grimsby and Hull fishermen also go to Iceland, Faroe and other distant grounds
but

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[Continued.]

Lord Northbourne—continued.

but I should think on the average a larger proportion of the Aberdeen boats are fishing in deep water and to the north. We do not fish south of the Dogger bank very much.

567. Then if one was to look ahead—I suppose it is a speculative matter, and you can hardly be expected to give an answer—if the whole thing is quite left alone, what would be the result in 50 years' time; do you think the supply of fish would be very greatly diminished?—Fifty years is a long time to look ahead, and it is not very easy to foresee; but I think in regard to these flat fish, which are on the whole more or less concentrated in the southern part of the North Sea, there is danger of a serious diminution in the supply in the course of time. In regard to soles, I think we have already very good evidence of that. In regard to plaice, we have very plausible evidence. It is only in the case of those fish whose area of distribution and whose area of migration is very much larger—fish like the haddock and the cod—that we feel comparatively safe as regards the permanence of the supply.

568. Have you any certain knowledge with regard to the spawning beds of these fish; do you know where the spawning beds of the plaice are; can you tell better in one locality than another?—No, I cannot give much definite information as to the spawning beds of the plaice, but we know now that the plaice do not spawn in those shallow waters where a great abundance of young fish are found; they spawn in general in deeper water, and, more or less, I fancy, over their general range of distribution.

Chairman.

569. But the spawn is carried with the current, is it not?—Yes, it is carried with the current.

570. And accumulates?—Yes, and the young fish apparently choose by preference these shallow shores to develop in. I may say that we may look upon these Eastern grounds, where small fish are so extremely plentiful, as a great area which is topographically very much the same as our own shore areas where the same fish develop; but owing to the gentle slope of the banks it is ever so much larger in breadth and area, and moreover it has very interesting conditions of temperature that make it highly suitable for the development of the small fish.

Lord Heneage.

571. The Aberdeen trawling industry is quite a young industry, is it not; it only started within recent years?—Comparatively. Its great growth is within the last 15 to 20 years.

572. And therefore the great interest in preventing this destruction of small fish lies with the Humber ports, which send out the greater part of the vessels in the North Sea, does it not?—Their interest is much greater than ours.

573. Are you aware that they find a great deal of difficulty now in getting catches of really good fish, and in consequence the skippers take the boats to these, what we should like to make forbidden grounds, to fill up their baskets?—Yes, that is so. We must also remember at the same

Lord Heneage—continued.

time that there is an enormously increased demand for fish, that if we brought into the markets the supplies of ten years ago there would be famine prices, and it is only reasonable to expect that to supply this great demand we should have to go all over the North Sea.

574. But are you not of opinion that the destruction of these small fish in these grounds which we desire to prohibit, is the reason of there being a scarcity of fish in other parts of the sea?—No, I am not prepared to go so far as that. There are still untold multitudes of these small fish upon the small fish grounds.

575. What do you call the small fish grounds?—These eastern grounds.

576. But if the trawlers were prohibited from going there and catching these small fish, would they not grow up and circulate throughout the sea?—Yes, we suppose they would; that is the presumed advantage of it.

577. And therefore the trawlers would not find the same difficulty in getting their catches of good edible fish?—No; we all hope it would tend to that result.

578. And you know that to be the reason, do you not, why the trawling interests of the Humber ports desire to be protected against themselves by the force of law?—I believe that is the reason. At the same time I am inclined to think that there is another very practical reason that influences them as commercial men, and that is, that apart from this prospective advantage which they hope for, the glut of these small fish is very much against them in their trade; it lowers prices and upsets the market.

579. And therefore they hope that in the course of a short time, if trawling in these grounds is forbidden, they will be able to bring to market fish that pay them very much better?—Very much better.

580. It is all part of the one subject. With regard to the question asked by Lord Northbourne just now about an International Agreement, are you aware that there was a conference in 1890, at which the representatives of Belgium, Denmark, France, Germany, the Netherlands, and Spain were all present?—I am aware of that.

581. That they concurred in a unanimous resolution in favour of a Bill to prohibit the landing and sale of these small fish?—That is so. I was talking to the Belgian delegates to the same conference only last week on the subject.

582. And you believe from what you know now that they have the same feeling in the matter?—Yes.

583. But they look to England, as the country most interested in this matter, to take the lead before those who have not already taken the lead?—That is true.

584. Although some have already taken action since that conference, as you told the President?—The Danish restriction on size is older than the conference; it dates from 1888. The Belgian is more recent.

585. And the Belgian was previous. But since that there have been two or three other smaller countries which have taken the initiative, but neither France nor Germany is willing to take

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[Continued.]

Lord Heneage—continued.

take any steps until England does; is not that so?—Germany does so far prohibit the landing of plaice of 18 centimetres, as I have already said; but that is a very small limit indeed.

Lord Tweedmouth.

586. You have had great opportunities of judging about the number of fish?—I have done my best.

587. I should like very much to know what exactly your own opinion is with regard to the diminution in the supply of soles?—With regard to soles I have no personal experience, for the simple reason that we only bring a few dozen fish into Aberdeen in the course of the year; but I cannot resist the general impression caused by English testimony, that soles are diminishing or have diminished; but we must remember that the sole is an extremely peculiar fish; its rate of increase is apparently small—and its area of distribution in our seas is also exceedingly small.

588. Then as to turbot and brill, have you any opinion with regard to them?—No, I have no definite opinion.

589. But you have no evidence before you that the supply has diminished?—I should not like to say that we have scientific evidence, but I should be quite prepared to admit that the supply of turbot was diminished—that it was difficult to keep up the supply of turbot.

590. And now as regards plaice, what have you to say?—As regards plaice, we begin to get into the region of difficulty. I have here a chart which shows the catches of plaice year by year, from the year 1886 to the present time, in the neighbourhood of the Isle of May, by the Granton trawlers; and when we look at this chart we see that the fluctuations are so great and so numerous, that although some of the recent years have been bad, it would be very hard to find evidence of a real diminution. The first years were certainly the best, but they were the first years of trawling in that neighbourhood.

591. Is that from the results of commercial trawlers?—This is from a fleet of from six to nine commercial trawlers working steadily on the same grounds for the last 18 years.

592. And the result of their working is, that you do not think you can honestly say there has been any great sign of diminution?—Not to what one would call a serious or certainly proved extent. In every one of the more abundant fish that we deal with in the north, in haddocks and in plaice and in all the rest, we frequently find apparent evidences of considerable diminution for several years, and then the catches go up again and belie our statistics. We have so many fluctuations to deal with that it is exceedingly hard to give a simple answer to a general question.

593. Then it really amounts to this, that so far as plaice are concerned, from your actual experience, you would not like to say they have diminished?—I believe the larger plaice are certainly fewer—that we skim off the larger plaice; but that there is an abundant reproductive supply still in the sea is undoubted.

Lord Tweedmouth—continued.

594. But without having so much experience of them, you are inclined to think that both soles, turbot, and brill have to some extent diminished?—Soles and turbot I should think have.

595. What would be your idea of the cause of the diminution in soles and turbot?—I think in that particular case, we are dealing in the outset with a vastly smaller stock, a stock upon which our own work may produce an appreciable difference, whereas on the great mass of these more abundant fish it does not for a much longer time.

596. You differ from the opinion that Professor Huxley used to hold, which was that no effort of man could really make any impression on the supply of fish in the sea?—I have pretty well come round to that opinion in regard to all the ordinary food fishes with which we deal in the north. I admit, however, as I have done, that the case of soles in particular is exceptional—that, perhaps, from slow normal rate of increase, from narrow area of distribution, and the enormous attack upon them, they probably have shown signs of diminution. Moreover, the sole is a southern fish, and though common on our own south and west coasts, it comes only a little way into the North Sea and appears to be there, so to speak, at the end of its tether.

597. Could you suggest to us any means by which that diminution could be checked, a diminution which you think is due to the work of man. How could man encourage the increase in the number of soles?—I know of no feasible method except the restriction of capture, that is to say, the imposition of a size limit.

598. Then really you think the imposition of a size limit for soles is more necessary than it is for plaice?—After all, soles have become of the nature of a luxury, whereas plaice are a very important matter in the food of the people, even in this country, and still more abroad.

599. Do you think the imposition of a size limit on plaice for a certain number of months in the year would result in a great increase in the supply of plaice?—That is entirely in the nature of an experiment; one approaches the experiment with an open mind, and one hopes that that would be the result. I have no idea in my mind as to how soon we should look for that result. That so many hundreds or thousands of tons of fish are going to waste, fish that might be left to grow is clear enough; and that somehow and somewhere these fish would be caught when they were grown is an obvious hope and obvious prospect. That fish would be more numerous in the sea I am not prepared to say, but that we should catch a certain proportion of larger fish where now we catch smaller ones is plainly to be looked for.

600. I should like to ask you, then, do you not think that it would be better rather at certain seasons of the year to prohibit fishing on grounds where you know that there is a quantity of small fish altogether, than attempt to deal with this matter by imposing a size limit on fish generally?—That might be, but that seems to me to be of the nature of a counsel of perfection. It is exceedingly difficult to close a great area of the open sea. I do not see how it can be done except by a system of policing, and that is a very serious

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Continued.

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serious matter to undertake. In the second place, if you try to do it in any other way than by policing, you will soon encounter difficulties; a rise in the market prices, a known increase of soles, perhaps, on the same ground, would soon send your trawlers back there. And further, I do not believe, from what I know of opinion abroad, that the foreigners would follow you in any such legislation. I asked the Danish representative the other day specifically on that point, and he said that since the imposition of the size limit their men still fish upon the same grounds as before, and it is the intention that they should do so.

601. Can you tell me what the effect is with regard to the Danish boats. Do the Danish boats stick to the size limit, or do they catch as many small fish and bring them ashore all the same?—They throw them overboard. At the same time, there is a remarkable industry in Denmark that consists in transplanting these small fishes from the eastern grounds we are speaking of to the Liim Fiord, where these small fish grow with great rapidity, where there is warm temperature and abundant food. Many thousands of these fish are transplanted there in the spring, and by the autumn have increased to a good marketable size; and by the autumn they are all caught and cleared off again. We have no area of sea in this country to my knowledge where that experiment could be performed.

602. We could not adopt any such plan as that?—No, we have no such area.

603. Is that a method which could be adopted to a greater extent over on that side of the North Sea?—I believe it is increasing; but it is already adopted on a very large scale, and a very large number of boats are engaged in that industry.

604. But under whose direction is that done? Who pays for the expense of it?—I am not able to say. I believe it is under Government inspection, but whether the Danish Government actually subsidises the transference of these fish in the spring time I do not know.

605. How far are they transferred; what is the distance between the Liim Fiord and the place where they catch these small fish?—A very short distance. These small fishing grounds go all along the western coast of Denmark, and the Liim Fiord is the great inlet of the sea that practically cuts off the north end of Jutland, so the distance is small.

606. You said that a quantity of these small fish were landed at Ymuiden?—Yes.

607. For a special purpose; what was that special purpose?—The skipper simply told us that these very small fish were salted and dried, and cut up into little dice and sold as a relish.

608. A sort of *hors d'œuvre*?—They were said to be distributed in public houses as a relish with beer.

609. Do you believe that it is necessary for plaice to go into deep water to extrude their eggs—that they require the weight of the water to help them to spawn?—I should not believe in the weight of the water theory, certainly; but it is undoubted that they do go into deep water. I am inclined to think that it is the result of temperature changes. We can see, for instance, (0.10.)

Lord Tweedmouth—continued.

in these eastern grounds, that as soon as the temperature markedly rises, as it suddenly does about the month of July, that is precisely the time when the plaice depart and go into deeper water. We have got a deal of information recently about the relation of fish movements to temperature, both on our own coast and elsewhere.

Duke of Abercorn.

610. Have you any knowledge as to the growth of flat fish? For instance, supposing a plaice was 10 inches in one season, how long would it take to become a 12-inch fish, supposing the feeding was good?—On the average, a plaice of that size would grow about three inches or a little more in the 12 months. It grows very little in the cold months of winter, but the next warm season would make it about three inches more.

611. And does it grow stronger in proportion than a sole would?—I know nothing about the precise rate of growth of the sole, but I may point out that in growing these three inches the plaice would double its weight.

612. It becomes thicker?—It grows in every direction, and the result would be, in this case, that its weight would be doubled. A plaice of 13 inches weighs rather more than twice as much as a plaice of 10 inches, and that is according to the simple rule that the weight (or volume) increases as the cube of the linear dimensions.

613. With regard to that cargo of fish landed in Holland, do you know where these small plaice came from—what beds?—They were undoubtedly caught not very far off. The same ground that skirts the western coast of Denmark skirts in a narrower strip the whole of North Germany and Holland.

614. What we call the far east coast?—When we speak of the eastern grounds we generally mean a little further; but practically from Texel or Terschelling right away to the coast of Denmark the same conditions obtain, the same conditions of depth of bottom and temperature, and the same currents that guide the spawn thither.

615. You said you had considerable knowledge of the feeling abroad with regard to the sale of these small fish; is it your opinion that if England takes the lead, other countries would join?—I think so; but up to a certain and fairly defined limit.

616. That is what I was going to ask you. Would they join in a universal limit of size, do you think?—I am not in a position to speak so definitely as that, but I think I may say definitely that a size beyond 10 inches they would not go to; that in Denmark at present, where they seem to be satisfied with their limit of restriction, the great majority of plaice sold are only a little above the limit; that an 11-inch or certainly a 12-inch limit would be objected to very strongly.

617. And are you of opinion that if some legislation does not take place with regard to these small fish, whether it is effectual or not, the destruction of the smaller fish would still continue?—I did not quite understand the question.

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618. That

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Duke of *Abercorn*—continued.

618. That if some legislation by England was not undertaken with regard to the destruction of these smaller fish, the destruction of these smaller fish would still continue; thereby showing, I mean, that much as we ought to endeavour to promote some legislation for the prevention of the destruction of these smaller fish?—I certainly think so.

619. May I ask you another question about the haddock off the coast of Aberdeen? To what do you attribute the great destruction of the smaller haddock? You stated that a large number that were landed were simply sold for manure?—There has been this year a very remarkable abundance of small haddock on our whole eastern coast—quite unusual. What cause that is referable to I do not know, but it is one of the phenomena we are familiar with in many fishes. In short, the existence of such phenomena is one of the great difficulties in our getting, through statistics, at any reliable evidence as to the steady diminution of our fisheries, since every now and then they surprise us by appearing in unusual abundance.

620. Naturally the destruction of this large amount of small haddock is the cause of a great loss of food to the public generally?—Yes, except that the very fact of the destruction shows that there is an exceptional supply to draw from. I may say that these small haddock which have been, to a great extent, wasted this year in Aberdeen would in Germany, every one of them, have been used: at Geestemünde, for instance, a large factory has recently been established in which the small haddock are first fried and then canned, which has had the effect of raising the price of small haddock there to about 10s. a cwt. that were formerly sold for 6d. or 1s., as they have been sold this year in Aberdeen.

Chairman.

621. Would that apply to plaice and flat fish; would they use plaice and flat fish in the same way as these small haddock in Germany?—They are on the whole more economical than we are in the using of small fish, but I do not think they could use these precisely in the same way. I should like to point out that if any difficulty arose in the case of small haddock, the difficulty is, perhaps, easier to deal with than in the case of small flat fish, owing to the circumstance that a very little increase in the size of the mesh of the trawl net would be sufficient to save the small haddock, while you cannot make your net large enough to let through even the small plaice without losing practically the whole of your haddock and a great many other useful fish.

622. I suppose you have had some experience in policing the Moray Firth by the "Jackal"?—Yes.

623. Has not that been found, even over a comparatively small area, somewhat of a difficulty?—We have on the east coast of Scotland not only the assistance of the "Jackal" under the Admiralty, but also two cruisers belonging to our own Board, constantly employed in policing the inshore waters of the eastern coast, the Firth and the various smaller areas that are closed.

Chairman—continued.

624. Do you think it would be as easy to police these eastern grounds as it is to police the Moray Firth, the inshore waters?—No, that would be even more difficult; it would be a very difficult matter indeed.

625. Did you ascertain while you were in Germany what are the Customs duties on imported fresh fish?—There are none; and I may also say the railway rates are more favourable for the transport of fresh fish in Germany, and that there is in that direction a great chance of a continually increasing market.

626. Are they subsidised by the Government?—The railways are, with unimportant exceptions, State railways.

626A. And are special facilities given to fresh fish by the Government directly?—Special and great facilities.

Lord Heneage.

627. Do they not come to England as well?—I am not sure about that, but they go all over Germany, and as far as Vienna, at rates we cannot touch in this country.

Duke of *Abercorn*.

628. Are not the fish railway rates in this country high?—I only speak from a general knowledge of the complaints of the trade, but the fish rates are very high.

629. And the complaint is general, not only in England and Scotland but in Ireland as well?—I believe so; I believe in Ireland the rates are higher still.

630. I suppose that naturally these heavy rates would interfere with the extension of the fish trade to a certain extent?—It is one reason that prevents our bringing to Aberdeen the small fish with which this Bill deals, because they are not worth the railway rates which we have to pay.

Chairman.

631. You mean that you could not send them from Aberdeen to London by rail?—No, we could not do that.

Duke of *Abercorn*.

632. Have you anything to say under the question of rates?—I can give a little information with regard to the German railway rates if it be desired. The general principle is, in Germany, that fresh fish is sent over the whole State railway system by fast trains at half the rate of other goods: and it is sent as far as Vienna, Munich and Dresden by special trains from Geestemünde. On the whole, speaking generally, these rates, which are uniform all over Germany, work out at very much the same, perhaps a little less, but not much less than the special rates we have got from Aberdeen to London for three-ton loads; but while we can only send our fish at these special rates to London and a few other places, you can send them over the whole system of Germany at a proportionately low rate.

633. By that you mean you can only send from one great centre to another at these low rates in this country?—Yes, while you have the advantage of the whole State railway system in Germany. With us, a special uniform rate of 60s. a ton is in force for quantities of three tons

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or more from all or any of the Scottish East Coast ports to London and certain other large centres. But, whereas the mean of this special rate is not very different from the charge in Germany for a similar service, in Germany the rate is a general one, in force all over the country and levied in proportion to the distance travelled. It is thus only, in the case of very long journeys that we have in this country even the appearance of cheapness. To illustrate the difference, we have from Aberdeen a uniform rate to Dundee, Edinburgh or Glasgow, of 45s. a ton (whether in large or small quantities) by passenger train. The distance from Hamburg to Berlin is rather more than the longest of these three journeys; but there the rate, by fast trains, is 3 marks per 100 kilograms, or approximately 30 shillings per ton, with a reduction to 21 shillings per ton in the case of five-ton lots and to 18 shillings per ton for ten-ton waggon-loads.

Chairman.

633.* You recollect, no doubt, the Bill of 1900?—I do.

634. In that Bill it was proposed to prohibit the importation and the sale of all soles and plaice not exceeding 8 inches, and turbot and brill not exceeding 10 inches?—Yes.

635. Do you think there is an advantage in reserving to the Government greater power of varying those limits, rather than to take a hard-and-fast limit, which may not be the best limit applicable under all circumstances?—Yes. I think in the present state of our knowledge it would be very reasonable to have powers of that kind.

Lord Hencuge.

636. Following the Duke of Abercorn's questions you have told the Committee that there are special facilities in Germany for sending fish to the larger towns. Is it not a fact that there are also special low rates *via* Parkeston to Harwich and London by the Great Eastern Railway?—I am not aware, but I should not be at all surprised to hear it. I also understand that there are in some cases in England favourable railway rates, for instance, by the Great Central Railway, which we have not the advantage of in Scotland, but so far as I know, on the whole the Germans are under a great advantage compared with ourselves as regards their railway rates; there is no doubt of that general fact.

637. You could not answer this question, that the rate of carriage from Eshbjerg to London is precisely the same as from Lowestoft to London, —only 1*l.* per ton?—I should be quite prepared to believe it.

Lord Northbourne.

638. You said, I believe, that you were coming round to the opinion of Professor Huxley, that the reproductive powers of the sea were such that no matter what took place in the way of fishing, the amount of fish would always be practically without limit. Can you tell me what is the reproductive power in the roe of a sole. I have heard some extraordinary statistics with regard to the herring?—I am sorry that at this moment I do not carry these figures in my head.

Lord Northbourne—continued.

639. Is it in millions?—No.

640. In hundreds of thousands?—I believe so. I am sorry I have forgotten the figures.

Lord Tweedmouth.

641. Could you put that in your evidence when you correct it for the sole, plaice, and the cod?—Yes, with pleasure.

[NOTE.—The number of eggs in a ripe sole has been estimated at from 100,000 (Herdman and Dawson) to 134,000 (Cunningham); in a plaice from 150,000 to nearly 500,000 (Fulton); or to over 700,000 (Reibisch); in a cod, from about 3 to nearly 7 million (Fulton). In a turbot we reach, according to Dr. Fulton, the highest number known in any of our food-fishes, viz., over 9 millions. But all these numbers represent only one factor, and probably a comparatively unimportant one, in the subsequent abundance of the progeny; there are other and more important factors that affect the chance of survival, and perhaps even of fecundation. In the case of birds it is a well-known fact that some of the most abundant species in the world are such as lay only one egg.]

Chairman.

642. Is there anything else you wish to say?—I should very much like this Committee to consider the extreme importance for the future discussion of all such questions as this, and in all the large questions that are connected with the abundance or local abundance, or probable decrease of fishes, firstly, of attention being paid in every way to the statistics of the market; in short, the desirability of the most precise market statistics being kept; next, and above all, of its being put in our power to obtain information as to the place of capture of the fish. At present we get a certain amount of information every day from a more or less limited number of trawling skippers as to where they have caught their fish; we get it in voluntary answer to our questions, and only from a small proportion of the whole; and various small changes, such as a little dissatisfaction with some legislation or other, or other causes, might rob us even of the amount of information on that subject that we now obtain. I think it is of the very highest importance for our whole knowledge of the fisheries, and for the whole business of tracing their fluctuations, that it should be put in the power of the fishery departments to exact information as to the fishing grounds which are actually being worked. We get our statistics of the amount of fish landed by each steamer every morning, and if we only knew where she came from, we would, in a very few years, be in a wholly different position in regard to this and all such questions.

643. That was strongly urged, was it not, by the conference at Hamburg?—It has been strongly urged by the conference at Hamburg, and it is a need that we all of us who are engaged in these investigations feel every day.

644. This country is expending a sum of 42,000*l.*, spread over three years, is it not, in doing investigation work in connection with the conference?—Yes.

645. Is much of that money being expended in the direction of obtaining statistics such as you

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Chairman—continued.

you suggest?—Not a large proportion of that money. We spend a certain amount of this money in Scotland in this way; but on the other hand, one must remember that the machinery for obtaining statistics, so far as I am at all aware, is with us very nearly complete. We get nearly all the statistical information that is humanly possible at present.

646. Did I correctly understand you to say that you are doing everything that you now can at the Scottish Fishery Board to obtain those statistics?—Very nearly everything that is possible; but we fall short of being able to demand information as to the place of capture; and if we got that, if the skipper were bound to fill up a schedule showing where he had been, that would multiply our information fourfold at least.

647. Are you aware that much information of that kind is being obtained by voluntary efforts of the Board of Agriculture and Fisheries and the trawlers in England?—I am quite aware of that fact.

Duke of Abercorn.

648. Have foreign nations the power of obtaining these statistics which you wish for this country?—I am not sure how far they are compulsory, but I know that in Germany at the present time, in the great harbour of Geestmünde every skipper on coming ashore hands in a schedule; but whether it is compulsory or whether he is doing it by voluntary co-operation with the scientific bodies I cannot say. But I know that these statistics, voluntary or otherwise, are checked by the fact that the German fishery cruisers report every fishing boat met with on the high seas, and these reports are afterwards compared with the schedules which have been sent in by the skippers. So that on the whole the Germans have extremely accurate information all the year round as to the place of fishing of their various fleets, and indeed of all their boats.

The Witness is directed to withdraw.

MR. GEORGE DOUGHTY (Member of the House of Commons), is Examined, as follows:—

Chairman.

649. You are, I think, Member for Grimsby, are you not?—Yes.

650. And you have been interested in this question for a number of years?—Yes.

651. And you represent a constituency which is perhaps more interested in it than almost any other in England?—Yes.

652. Do you know the views of the Grimsby fish merchants on this subject?—I know the views that have obtained amongst a large proportion of them for a number of years, but I would not like to definitely express an opinion on the merits of this Bill until they have had an opportunity of discussing it.

653. We shall, no doubt, have an opportunity of hearing their views when they are called before the Committee?—Yes. So far as I am concerned I am afraid that unless I had an instruction from my constituents I could not support this Bill in its present form. All the legislation that they have been aiming at up to the present has been, of course, by statute, that a certain limit in the size of fish was to be made law. But it would appear by this Bill that enormous powers are to be conferred upon the Board of Agriculture and Fisheries, and it would seem to me that, practically speaking, the prosperity or otherwise of the fisheries, as far as the deep sea fisheries are concerned, is going to be vested in this Department in the future. As to how far that is a wise step, and how far my constituents would be prepared to go in that matter, I am not at the moment prepared to say. My own view is that I am afraid the powers asked for are very much more than I should be prepared to support, because it seems to me that it might be possible for orders to be made which might confer advantages on one section of the fishery to the disadvantage of the others. And we have a very powerful illustration of that in the action of the Scottish Fishery Board, and one which is, as far as Grimsby is concerned, almost a daily illustration. They, as you know, close the Moray

Chairman—continued.

Firth against all British trawlers, and although, of course, they have no power to prevent foreign trawlers, yet the fact of their closing the Moray Firth gave to the foreign trawlers an enormous advantage in fishing in those waters over the British trawlers. The effect of the whole thing at the present time is, that a considerable number of practically English-owned ships have been transferred under the Norwegian and other foreign flags, and are working those grounds and bringing in fish to be sold at the English market. Now it seems to me that it might be possible for the Department to be so influenced by what small sailing trawlers might think of their interest, who probably might be able to convince the Department that the small sailing trawler, around the coast and on certain of our shallow waters, was not seriously injuring the fishing grounds, and it might be possible that they should be excluded by the Department from the operation of the provisions and powers that your Department might put forward. If that were so, while it might look very nice on the surface, it would give to these people an exceptional opportunity of enriching themselves by fishing at certain periods of the year, especially soles, on certain shallow grounds, at the expense of the great deep sea fisheries. I should like to say that during the last two years my mind, to some extent at least, has been a little disturbed on that question. Two years ago I took considerable interest in the matter when the question was before a special Select Committee of the other House; but during the last two years there has been an enormous catch of fish in the North Sea. I should say it could be proved that never in the history of fishery has there been so much fish caught and to be caught in the North Sea as during the last two years, and the Professor who has just spoken has indicated, I think, that fact by some statements he has made, particularly that in respect to small haddock. The small haddock has been very abundant.

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Chairman—continued.

abundant over the whole of the North Sea, and small plaice have been abundant all over the North Sea, and fishermen tell me—and, may I say, of course I am commercially interested in this business as well—that at certain periods of the year, instead of finding very small fish, as we used to when they were to be found almost entirely on the eastern coast, where those long flat grounds exist on the German and Dutch coasts, now they are found in all parts of the sea; and therefore it becomes a question as to how far this limit that is proposed is going to help the fishery. I myself would like to say that we are very much indebted to you, Lord Onslow, for the action you have already taken in endeavouring to get information, but it does seem to me that the Department probably (I express this opinion very guardedly) are moving a little too hastily in endeavouring to get great powers of this kind. In getting the information such as they are asking for now, and such as I venture to suggest might be largely increased if the Department would spend some money on the question—I am referring to a suggestion made at the close of the evidence of the Professor just now—if you are to have that information—and I grant you it is essential that you should have it—then you ought to pay the fisherman for filling in his return to you, and if you did that, then in my opinion you would get an enormous amount of information; and later I think probably, with such information as that in your hands, you might be able to do something very satisfactory in the direction of helping the fisheries in this direction. But there is one vital question, and I think one foundation principle, that the fishermen and those interested in the fishery will cling very tenaciously to, and it is this, that whatever is done in relation to this question, it must be an international movement. Now it seems to me that if Parliament or the Government could move in the direction of endeavouring to get international action, whereby all the Great Powers bordering on the North Sea would act mutually and act together, then probably there might be some great advantage arise eventually to the fish food supply of the country. But if it is to be that we as a nation are to be excluded from fishing on these grounds, and the Germans and French and Dutch and others are to use them, then for my part I do not see that we are going to help in replenishing the sea very much, and, on the other hand, I am afraid we are going to assist in enriching them at the expense of our own fishermen. I do not like these very wide powers. I think the Department is asking for a very great deal when they are asking that the whole of the future, so to speak, of the fishery should be handed over to them as a department.

654. You are aware, I daresay, that this subject has been before Parliament for a great many years?—Yes, but never in the direction of asking that powers should be conferred on the Department that should give them the right to say what proportion of the coast shall be excluded and what shall not.

655. But you are aware that the reason why earlier measures have not met with better success, was because of the opposition they met

Chairman—continued.

with from Members of Parliament representing certain districts when the fishermen went out to fish in the neighbourhood, that it was owing to that that legislation has not taken place before?—I think that if Parliament had been really serious in the matter they would not have allowed a great measure to stand from being made law because Mr. Gibson Bowles and two or three other gentlemen opposed it. There never was a large number of people against it.

656. But you think that we might well wait and get some further statistics and some further knowledge before we attempt any legislation?—My feeling is that in the present condition of our knowledge and in the face of what has occurred during the last two years, it is a matter on which we ought to be fully informed before any very drastic steps are taken.

657. You do not think that time presses, but that we may afford to wait a good many years yet?—No, I would not say that, but I do think we might wait two or three years longer.

658. Wait until we got an international agreement?—I think so. I think that is one of the most important steps of all, if not the most important.

659. You are not speaking for your fishing constituents?—No, I am speaking for myself; but I believe they will follow me very largely in the views I have expressed.

Lord Tweedmouth.

660. You would not approve of any difference being made in the regulations as applied to different classes of fishermen?—Not at all.

661. If a limit were imposed on the size of flat fish to be landed, you would think it ought to be of universal application and not applied only to trawlers, whilst the small fishermen, who are the only people who can afford to land fish of that size, are allowed to go free?—I think if you make a regulation it must apply to all fishermen.

662. Wherever the fishermen are and from whatever part of the sea they take the fish?—Yes; because I believe with their small trawls they destroy the fish food of that particular place just as much as the bigger trawls may destroy them in another place.

663. You would, however, approve of a general limit being imposed on the size of flat fish to be taken, would you?—Yes, I think I would, but would like it to be an international limit.

664. I am coming to that in a moment. Could you tell us what would be the sizes of the limits that you would propose, from your knowledge of the fish trade?—I forget the limit, for the moment, which was submitted to Parliament in 1900.

665. Eight inches for soles and plaice and eleven for brill and turbot?—I thought it was a very small limit myself.

666. Would you propose 10 inches for plaice or all round?—I should say 10 inches all round. I know it was the opinion of many of our people last time that if a mistake was made the limit was too small.

667. Do you think that 10 inches should be made the limit for all those four kinds of flat fish, plaice, soles, turbot and brill; or do you think

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Mr. DOUGHTY (Member of the House of Commons):

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think that we ought to have a higher limit still for turbot and brill?—I should say for turbot, brill and plaice it would be no worse if it were 12 inches.

668. You put plaice as high as 12 inches?—I would not like to say definitely for plaice, but certainly for brill and turbot.

669. You have not formed any distinct opinion as to what the limit should be, but you think there should be a limit below which such fish should not be landed or sold?—Yes.

670. And in your view the proper way to enforce it would be by means of a convention between the various nations fishing in the North Sea?—Yes.

671. And that the same limit should be applicable to fishermen of all descriptions?—Yes; and I should prefer very much myself that there should be an area, if it could be arranged, that the great areas on the other side

672. You would like to have a close time?—of the Eastern grounds could have a limit of time. Yes; I think that is a far more reasonable solution of the difficulty, if it could be arranged.

673. Would not the powers on the other side rather object to a close time being imposed there if no close time were imposed off British shores?—I do not know why, if the same conditions obtain, there should not be a limit.

674. But the same conditions do not arise?—But we have not got the long flats that they have. Nature has made these grounds, so to speak, for these fish, and they ought to be preserved, I think, for two or three months in the year.

675. What do you say to the other power which it is proposed to give the Board under this Bill, to prohibit steam trawling within the three-mile limit?—They cannot trawl within the three-mile limit now, you know. I think the Fisheries Committees, generally, especially the Eastern Fishery Committees, have carried out their work very well indeed, and what they have done has been to distinct advantage.

676. But are you in favour of giving the Board the power to close steam trawling within the three-mile limit all round the coast?—There is no steam trawling within the three-mile limit all along the coast.

677. But there might be in certain places?—I do not think there ought to be.

678. It is proposed in the Bill that the Board of Agriculture and Fisheries is to have that power, a power which is already given to the Fishery Committees, to prohibit steam trawling within the three-mile limit?—It seems to me, according to this Bill, that the Fishery Board of Scotland and the Irish Fishery Board would have the same power that the Board of Agriculture would have to apply that; but it might not follow that they would apply the same principle.

679. But the Scottish Fishery Board have already power to prohibit steam trawling within the three-mile limit, and they have done so?—I do not know that there are any Fishery Committees round the coast of England that have not done the same.

680. That is not my question. My question is, do you approve of the Board of Agriculture being given this power besides the Fishery Com-

Lord Tweedmouth—continued.

mittees having it?—If the Fishery Committees round the coast now have the power I do not see why it need be conferred upon any other Department necessarily.

681. The Department might think it was desirable to make a general closing all round the coast?—There could be no harm in their having the power, because I am certain they would not exercise it arbitrarily against the Fishery Committees.

Earl of Yarborough.

682. You said that so far as your information goes the small fish come from all over the North Sea?—At certain times of the year I am told there is small fish to be found in all parts of the North Sea.

683. There would be some difficulty then, would there not, in arranging the area to be prohibited, if it was an area?—Yes, but only to this extent of course, that the real home of the small fish at certain periods of the year is on the coast of Holland and Germany; all along the Dutch coast there are scores and probably hundreds of thousands of tons of it at certain times, and I believe if that coast could have a close time, for three months say, that would re-people the North Sea.

684. You said that you were in favour of an international agreement. We were told yesterday that at the conference at Hamburg foreign countries are inclined to follow the lead given by Great Britain?—That was what Cobden said in respect to Free Trade. So far as I am concerned I should want a convention settling the thing before we were committed definitely to a proposal of that kind.

Lord Heneage.

685. Following up Lord Yarborough's question what we were given to understand, both yesterday and to-day, by those who were present at Hamburg is, that foreign countries are not willing to move until England moves, because by far the largest catch comes to England, and they think that she ought to take the first step towards making any law?—I think England is the party to move first, because we are the largest consumers and catchers of fish; but it should be in the way of a convention if they do come to terms.

686. I understand you to say that there had been a large increase in the amount of fish caught during the last two years. You did not include plaice in that, did you?—Yes.

687. You are, of course, aware, though perhaps you have forgotten it at the moment, that the number of plaice has been reduced by one-third during the last year; there were one-third less brought in in 1903 than were brought in in 1902. In the year 1902 there were 1,276,000 odd plaice brought in; last year there were only 887,590 brought in?—I have not seen those figures.

688. So that there was a reduction of one third last year in the catch brought into England and Wales?—I only took the aggregate amount of fish, taking our own port, which is by far the largest.

689. But that is all kinds of fish?—Yes. I suppose, during the last two years there have been 25,000 more tons caught, but we have not any more catching power.

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[Continued.]

Lord Heneage—continued.

690. But there has been a great reduction in plaice?—Well, that I do not know. Those are the figures for the whole of the United Kingdom?

691. Yes?—I was speaking more particularly of Grimsby. I have not seen the figures for 1903.

692. With regard to this Bill, your objection is not to stopping the catch of undersized fish, but to the large powers which are proposed to be given to the Board of Agriculture and Fisheries, which you think might be used in a way detrimental to certain portions of the trade?—Yes.

693. One of your reasons, I believe, is that if, for instance, the prohibition was limited to steam trawlers, the sailing vessels would immediately be produced in large numbers, and would go into the very grounds the steam trawlers were prohibited from going to?—Yes. Take the Brixham trade for instance, the whole of the ships practically out of Brixham are sailing ships. At Lowestoft, again, they are nearly all sailing ships. If any regulation of that kind were established, it must be clear at once that great injury would be done to our steam trawling industry.

694. That is your principal fear, and it is the speech which was made by Lord Onslow in the House of Lords in introducing the measure which has given you that fear with regard to the Bill which you had not before?—Yes, and the fact that some of my friends in the House of Commons seem to think they are all right—that they will be pretty well safeguarded; I mean those that represent the smaller fishing industries.

695. But generally you are in favour of this Bill, like the rest of the trade, when we went on that deputation to Lord Onslow which you were unable to attend?—Yes, I am in favour, of course, of some measure of this kind being adopted eventually; but I wish, first of all, to say tenaciously that I think it should be an International arrangement.

696. But supposing that it is impossible to get an International arrangement, would it not be better for the trade for England to take the lead in a measure which might afterwards become an International measure?—Well, it might; that is a question to which I would not like to commit myself.

697. With regard to the Bill of 1900, you supported that Bill?—Yes.

698. Very strongly?—Yes.

699. And you would support it again?—I would, given International conditions. On that Bill we talked a great deal about the necessity for an International arrangement, and I think we had some promise in respect to that.

700. But your real objection to the present Bill is that under the Orders it might be limited to areas and limited to certain kinds of vessels?—Yes.

701. Whereas, if it was a uniform Bill, like the Bill of 1900, it would practically be for the whole trade?—Yes.

702. That is really your objection?—Yes, certainly.

703. And with regard to the opposition which the President just mentioned to you just now to

Lord Heneage—continued.

the Bill of 1900, you believe that there was practically no opposition at all except from a small handful of Members?—That is so, and, of course, the Government were not prepared to give time to fight the thing through the House, they were prepared to put the Bill through if it could be put through in a night.

704. But you believe that if such a Bill was proposed now it could be easily passed, if it was intended to be passed?—I believe so; I think there can be no doubt about that.

705. Therefore you would prefer such a Bill to this Bill—that is your point?—I would, certainly.

706. But supposing the Government do not think from their information that such a Bill could be got through, do you object to this tentative legislation?—I must allow the trade that I represent to speak on that subject.

707. As a matter of fact, so far as you know, in Grimsby now they are in favour of the Bill; they are going to send representative witnesses here?—I do not think they are in favour of this Bill. I only give that as my opinion—I do not know.

708. Is that since the Bill was printed?—Several of those who have spoken to me on the question have expressed their opinion on this very point that I have been trying to raise.

709. That is to say, that they prefer the Bill of 1900?—Yes.

Lord Northbourne.

710. You think this Bill is rather too drastic?—I would not like even to say that. It is these enormous powers that are going to be conferred on the Department which I do not like. We are going to hand the whole trade over, so to speak, to the Fisheries Department, which is most excellent?—I do not find one word of fault with it, but still they are great powers to give. To give the Department power to differentiate between one class of trader and another, is to give a very great power, which may work very detrimentally and very disastrously to our interests.

711. Would it lead to a large increase in the number of officials?—I would not make any objection to that. I do not think Parliament has spent anything like enough money on official Departments for the benefit of trade.

712. I asked a witness yesterday from Aberdeen if a fisherman was fined 20*l.* for bringing in a box of undersized fish, what would happen; and he said he was quite certain that such a case would not occur a second time. How would that be in Grimsby?—Well, in the first place the fisherman would not pay the 20*l.*; the owner of the ship would have to pay the 20*l.*

713. What effect would that have?—I believe, of course, that if an Act of Parliament were passed the fishermen generally, and the trade generally, would loyally abide by it, and do their best to carry it out, undoubtedly. They are a law-abiding people.

Chairman.

714. There is undoubtedly a very large number

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[Continued.]

Chairman—continued.

number of undersized fish in the sea, is there not?—I should think so; it would be a bad job for us if there were not.

715. Is it absolutely necessary in your opinion that every one of those small fish should be preserved?—No.

716. Or would it protect the interest of the trade sufficiently if the great majority of them were preserved?—Of course, the sea is very large to commence with, and most abundant, and the fish in it multiply very rapidly, and so far as all the information goes that I have been trying to obtain on that question, the more you look upon it the more complex and difficult it is. There is an abundance of fish in the sea, there is no doubt. But there is, at the same time, a necessity if anything can be done that is equitable and just, to preserve flat fish; but how that is to be done and the means by which it is to be accomplished seem to me just at the moment not to be perfectly clear.

717. But you admit, do you not, that a very large proportion of undersized fish in the sea are to be found on the Eastern banks?—Yes, decidedly.

718. Therefore, anything which prevents their being caught would be to the good?—Enormously so.

719. The power which is given to the Board of Agriculture under the Bill is not limited to steam trawlers, is it?—No, it is not limited to steam trawlers.

720. If it were found that the prohibition of landing from steam trawlers was not sufficient to prevent these fish from being caught and landed, it would be quite within the competence of the Board to extend that prohibition to sailing trawlers that went to those grounds, would it not?—Yes; but then you see you are purely looking at it from the standpoint of the Department; I am looking at it from the standpoint of those who have their investments in the fishery and are working the fishery, and I say again, if you are going to prohibit the steam trawler from certain areas, and are not going to prohibit the sailing trawler from the same areas, you give him a certain advantage over his fellow steam trawler.

721. But is there anything to prevent the Board from applying the same prohibition to the sailing trawler?—I do not say there is not.

722. Then your fear really is that the Board might misuse their powers?—I would not like to say that they would think they were misusing them, but we have the object lesson of the Moray Firth which faces fishermen, and which they do not forget, and never will forget so long as it continues.

723. But you are aware that in the case of the Moray Firth it is quite competent for a foreign trawler to catch fish there and send it for sale to England?—That is what they do; that is what we complain of.

724. Under this Bill, would not power be conferred on my Department to enable them to prohibit the landing of undersized fish from any foreign vessels?—I do not see what there would be to prevent the Dutchmen, say, sending their vessels on to these

Chairman—continued.

shallows and getting large quantities of this fish that are just above the limit, and sending them into Billingsgate.

725. And throwing away the others?—Yes.

Lord Tweedmouth.

726. Or sending them abroad?—Yes, they would do so undoubtedly; and it would pay them to do it.

Chairman.

727. Would it pay them to sell them abroad?—When these fish are in such abundance it would pay them to send their vessels, as they are very near the fishing grounds, and get, as they can, large quantities of these that are just above the limit, and send them to our markets, and sell the others abroad.

728. Where could they sell the others abroad?—I do not know.

729. Is there a market for them abroad?—I do not know.

730. Have you at all followed the action of the Board of Agriculture in regard to framing Orders regulating the diseases of animals?—No.

731. Have you heard of any complaint from farmers or consumers, or anybody else, that the Board misuse the powers conferred upon them?—No.

732. Are you aware that the Home Office and the Local Government Board both proceed by Regulation, which is very much the same as by Order, in a great number of matters?—I am not aware that the Home Office have such sweeping powers over any particular trade as you are asking for in this Bill.

733. Well, you know their powers under the Factory Legislation for the regulation of factories?—Yes, but there is a statutory limit in all those cases.

734. Have you heard complaints of any Government Department having abused the powers which Parliament has entrusted to them?—Well, I refer to the Moray Firth once more.

735. You are aware, of course, as many witnesses before this Committee, and before the Committee of 1900 have said, that we do not know enough about the subject yet to be able to lay down hard-and-fast rules in an Act of Parliament?—Yes.

736. Do you think therefore that there is no advantage in preserving some elasticity, so that we may be able to alter our regulations in accordance with the experience that we gain?—I think you know that in the last two years we have made a great stride forward in getting a Department for the trade, and in getting a Minister such as yourself, who will put into operation the powers that you possess, namely, for getting this information from these people from time to time. At the present time we have not sufficient knowledge of the habits of fish, and there is no doubt that on the whole question of fish we are almost as ignorant as we can be even now. One could not help being struck by what the Professor said just now on the same matter.

737. Then do I rightly understand you to say that you think that that should be the limit of any

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[Continued.]

Chairman—continued.

any power that is given?—No, I do not say that. I simply say that the powers asked for here are very drastic, and unless they were carefully guarded might injure the trade.

Duke of Abercorn.

738. You stated that if information of this kind was to be given by the skippers they ought to be paid for it?—Yes.

739. Are they not patriotic enough to give information like that without being paid for it?—I am bound to say that they are, I think, as patriotic as any other people under the Crown, but you must bear in mind that they are not clerks, they are fishermen, and if you give them an order to fill in properly they ought to have a proper kind of form to fill in to hand in to the Board of Trade or their department in the fishing ports. I think they ought to be recognised by a payment for that service. It is only fair that they should be. It does not seem to me reasonable to expect these men to fill in these returns, but they are the persons who really should fill them in. That statement of returns that Lord Onslow has asked for has been filled in at the offices of the various companies and owners, and it is impossible for them to know where the fish comes from; that is altogether out of the question; therefore you will not get that information as to where the fish has been caught from the source from which you are asking it at the present time—the fishermen. The captain of the ship is the man who should fill in the return.

740. I was referring to him?—You say that the return should be sent, not by the owners, but by the fishermen direct to the Board of Trade representative. If you ask these men to say where they catch these fish, you must be prepared to secure to them absolute secrecy; there must be no question as to its being known where they do catch them, or you will not get that form filled in correctly and honestly; but if they were perfectly certain that the information

Duke of Abercorn—continued.

would be absolutely secret, and if they were paid some small sum for it, you would get any amount of information that you require.

741. I suppose the work would not be very onerous; it would only be once on each voyage?—Yes; perhaps not more than once in three weeks or a month, especially from Iceland and Faroe and those places.

Lord Tweedmouth.

742. A skipper naturally likes to keep his knowledge of where a good catch may be expected to himself?—Yes, naturally, but the fishermen generally have great respect for the Board of Trade; the Department has always treated them fairly and has their confidence and respect; and I am certain they would try to carry out what the Board and the Department wish, so long as in doing so they were recognised by some small remuneration, which I think it is only fair they should have. We are spending 42,000*l.* now in this other inquiry which is going on—I do not know what is going to come out of it—but I take it that for the expenditure of a small sum of money, comparatively speaking, say 2,000*l.* or 3,000*l.* a year, you could get all the information you might require in great abundance.

Lord Northbourne.

743. Is it not rather your opinion that neither the fishermen, nor the man of science, nor anybody, knows a great deal about the habits of fish?—They do not know as much as we should like them to know.

Chairman.

744. 42,000*l.* is a large sum to spend; do you think it is likely that the Treasury would consent to any addition to that very large sum being spent in three years upon fishery investigations?—I should like some proportion of that 42,000*l.* to be spent in the direction I have indicated; we should get a much more practical and beneficial result from it.

Dr. WEMYSS FULTON is called in; and Examined, as follows:—

Chairman.

745. You are, I think, the scientific superintendent of the Fishery Board, Scotland?—Yes.

746. And you have had considerable experience—how many years' experience have you had of fishing investigations?—Rather over 16 years.

747. Is that in investigation and in accompanying steam trawlers?—During the past few years I have gone out on steam trawlers occasionally.

748. Your colleague, Professor D'Arcy Thompson, spoke to us a great deal about the vitality of fish after being captured, and the length of time they could stay out of water; do you corroborate that, and hold the same view?—Yes; it depends upon the species of fish, of course, and upon the ground and duration of the haul, and so forth.

749. On the ground?—On the nature of the ground.

(C.10.)

Chairman—continued.

750. But you agree that fish that have been a considerable number of hours out of the water, plaice at any rate, may be expected to live if they are thrown back?—Yes, certainly plaice.

751. And you agree, I suppose, that the great nursery for undersized fish is what has been called throughout the inquiry the eastern grounds?—Yes, that is where the small fish tend to accumulate.

752. Have you anything to say as to the supply of flat fish now, as compared with former years?—I have a very strong impression that in comparison with the increased amount of fishing the quantity is much less.

753. Have you at all gone into the comparison between what used to be taken by a sailing trawler and what is taken now by a steam trawler?—No, I have not gone into that; but judging from the statistics—I have not got them

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[Continued.]

Chairman—continued

them before me—I think it is quite certain that the supply of flat fish in proportion to the means of capture has fallen off.

754. Notwithstanding the fact that the apparent numbers landed do not show a great falling off?—Yes.

755. Therefore the statistics must be examined in connection with the wider area of fish, the greater number of vessels fishing and the greater catching power of the engines employed?—Yes and the place of capture.

756. You have read the Bill, no doubt?—Yes, I have read the Bill.

757. And you gather from it that the object is to protect, as far as possible, these eastern grounds from depletion? Two plans have been suggested: one, that which is contemplated in the Bill; and the other, that the area should be prohibited. Do you think it would be practicable to prohibit the area to our trawlers?—It would be a question of police supervision, but if it were practicable, I think that would be preferable.

758. You experience some difficulty now, do you not, in policing your own waters?—There is some difficulty.

759. And do you think there would be greater difficulty in policing these large areas off the coasts of other Powers?—Yes, there would be greater difficulties.

760. I take it that in Scotland there would be some objection to prohibiting the sale of undersized fish caught round your coasts? I do not mean within the three-miles limit, but just outside?—There might be in the smaller places, but I think at Aberdeen the quantity of plaice, for example, that would be affected by a moderate-sized limit would be very small; they do not get a great proportion of small fish in the north.

761. If it was a penal offence to have in your possession and for sale these small fish, might not that work hardship upon small dealers?—Yes, it might.

762. And you think there would be less objection to a prohibition on the landing of fish than on the sale of fish?—I am not quite sure as to that.

763. Have you formed any views as to what should be the limits of the size of the fish?—I think that is a question that might be left to the different departments. I think it is one of the best features of the Bill, that a hard-and-fast limit is not laid down in it to apply generally everywhere, but that discretion is left to the different departments to fix the limit.

764. And much might depend, might it not, on the place where the fish were caught?—Yes.

765. Probably a high limit that would be fairly applicable to the eastern grounds might work considerable hardship if applied to the smaller nurseries off the coast of Scotland?—Yes. The flat fish on the coast of Scotland are rather larger in proportion; I mean the size at maturity is rather larger. A limit that would apply to the east coast of Scotland would not really apply to the south coast; it would be a greater hardship to the south coast.

766. Generally you think the fishing industry

Chairman—continued

of Scotland would wish that any Orders made under the Bill should interfere as little as possible with the fishing industry and with the smallest number of boats fishing?—Just so.

767. A question was raised, by one of the witnesses, I think, whether it would not be possible to arrive at the object which is desired by limiting or increasing the size of the mesh. Do you think that would have any effect in stopping the capture of undersized fish?—In the case of trawling there is this great difficulty. The trawl captures all kinds of fish, and these fish differ very greatly in size, the immature and mature, according to the species; and unless there was some predominant fish on the grounds I think it would be impossible to regulate the mesh of the net in that way to make it effective. You might regulate the mesh for, say, haddocks, and that would capture immature plaice; or for plaice, and that would allow the haddocks to escape.

768. Therefore you do not think that any change in the size of the mesh would effect the object that the Bill is designed to meet?—I should like to have particular information as to the proportion of fish of the different kinds from this ground. I understand that there are two species, soles as well as plaice, that take the trawlers there. In that case I do not think the regulation of the mesh would meet the difficulty.

769. But would it not be necessary to have different nets for fishing different grounds?—Yes.

770. Would not that be a very great increase in the expense of the work?—Yes, and it would scarcely be practicable.

771. You observe the classes of flat fish which are mentioned in the Bill. Do you think that that covers the whole of the flat fish which it is desirable to protect?—I think it does at present. But in the course of a few years it might be desirable to establish a size limit for some other species. I thought that you might include, say, "other flat fish"; I mean the clause might be amended to that extent.

772. There are some flat fish, are there not, which are very small but never grow larger than that very small size?—Yes, I have some here.

773. Do you think there would be an advantage in protecting fully-grown small fish, even though very small?—No, I think not.

774. Take a dab, for instance?—No, I think there is no advantage in that. This, for example (*producing a very tiny fish*), is a flat fish, and it is a mature flat fish.

Duke of Abercorn.

775. What is the name of that?—It is the little or yellow sole. This is a fish that goes through the ordinary mesh very readily.

Lord Northbourne.

776. What do you mean by a mature fish?—A fish that has developed reproductive organs is a mature fish.

Duke of Abercorn.

777. How do you know that is a mature fish?—It has developed eggs. I dissected them out.

778. Where

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[Continued.]

Lord Northbourne.

778. Where was it caught?—It was caught in the Moray Firth.

779. How long ago?—In December. Here are others (*producing others*).

Duke of Abercorn.

780. Are these all caught in the Moray Firth?—No, they were caught in different places. But *this (holding up a much larger fish)* is a plaice, and it is quite immature.

Chairman.

781. How big is that?—10 inches.

Lord Heneage.

782. And that is an immature plaice?—Yes. I show these to show the very great difference in size.

Lord Northbourne.

783. How many eggs would a fish of that size have?—It would have perhaps about 200,000 when it spawns for the first time. This fish, of course, is immature, but when it gets mature it produces from about 200,000 to 400,000 or 500,000 eggs.

Duke of Abercorn.

784. At what size will they begin to spawn?—About from 14 to 17 inches.

Chairman.

785. Is that all you have to say to those specimens you have brought?—In connection with the mesh of the net I might point out that the determination of the mesh would depend very much upon the shape of the fish. *This (producing another fish)* is rather like a sole; it is not a sole, but it is a long and slender fish, the witch. *This (producing another fish)* is a plaice; it is very rigid and broad, and it would require a very large mesh; while a large mesh for it would allow a great many of these other large fish to escape. That shows the difficulty that you have when dealing with mixed fish.

786. With reference to the Bill, you think, that in view of the somewhat chaotic state of our information generally on the habits of fish, it is an advantage to have the Bill somewhat elastic, so that it can be altered?—Yes, I think that is one of the great advantages.

787. If we make any false step we can retrace it?—Yes.

788. Whereas such a Bill as the Bill of 1900 once passed by Parliament could not be altered without further recourse to Parliament?—Just so.

789. Do you concur with what Professor D'Arcy Thompson said with regard to the desirability of obtaining further information as to the place where undersized fish are caught and fish generally are caught?—Most emphatically; I think that is really the most important thing.

790. Are you conducting the investigations on behalf of the Scottish Fishery Board under the International Sea Fishery Conference?—No; Professor Thompson is doing that.

791. And he has told us that practically the Scottish Fishery Board have exhausted all their power of obtaining these statistics?—They have really no power at all, I understand, to compel information to the place of capture.

Chairman—continued.

792. But with such powers as they have, that is, of ascertaining the numbers landed, and so forth, you are doing all that you possibly can in that direction?—Yes.

Duke of Abercorn.

793. I suppose you agree with other witnesses when they stated that the general knowledge of the habits of fish now is really very limited?—Yes; still we have made great advances during the past few years.

794. That is owing to scientific observations made by gentlemen like yourself?—Yes.

795. Still they may be extended very considerably?—Yes, they may be.

796. If more money be given by Government, the result would also be to a larger extent more useful?—Yes, I think so.

Lord Tweedmouth.

797. Have you ever been on those eastern fishing grounds yourself?—No.

798. You only know them from hearsay?—Yes; but I should think the investigations being made by the Marine Biological Association should give exact particulars as to the proportions of different kinds of fish there.

Duke of Abercorn.

799. Where do the Aberdeen trawlers go to chiefly?—They work chiefly in the north. This is a chart of the North Sea (*producing the same*) and this shows where they were working, for instance, in 1901. They go very little to these eastern grounds or south of the Dogger. The dark colour shows where they work chiefly, that is, up north-east of Aberdeen (*holding in the same*).

Lord Tweedmouth.

800. You rather seem to point to having different sized limits for different parts of the coast?—I think that would be necessary, at least from a biological point of view, because the rate of growth is different on different parts of the coast and the size at maturity is different; the biological limit is different.

801. That is all quite true; but do not you think there would be grave difficulties in having one limit in one part of the coast and another limit in another part, even if you had one limit on the east coast of Scotland and another on the south-west coast?—There might be; but I think since the fixing of the limit is given to the department, all these questions would be taken into account and very fully considered before the limit was fixed.

802. Do you really think it is possible to have two or three different limits of size for flat fish in and around the coasts of Great Britain for the same species? I am not speaking from a scientific point of view; I am speaking from a practical point of view. How could you get fishermen to understand that they could land fish of a certain size in one port and not in another?—I think the difference of an inch or two between Scotland and England would not have much effect in that way; because I think it would not pay to send the fish down to England for the sake of an inch or two of fish over the limit.

803. So far as Scotland is concerned, do you think that the imposition of a size limit on flat fish

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fish would have the effect of increasing the supply of fish in Scotland?—No, I do not think so. I think the Bill has very little application to Scotland.

804. You think so far as Scotland is concerned it really does not matter?—Or it matters to a slight extent.

Earl of Yarborough.

805. We have been told that very few small flat fish go into Aberdeen—under 20 tons in the year?—Yes.

806. Why is that?—The Aberdeen trawlers fish in deeper water. The southern part of the North Sea is very shallow, and it is there that the small fish accumulate. In Scotland the small fish are in the bays, which are closed to trawling, that is where, but out in deep water, you get very few of these small fish.

Lord Heneage.

807. You said just now that the information was to a certain extent limited with regard to fish: but do you see any reason why we should not have legislation pending further investigation?—No.

808. Do you see any objection to legislation at the present moment?—No, I see no objection, because this Bill is not compulsory. It does not fix the size, and it leaves both discretion and time to the different departments to investigate the matter and get full information.

809. And do you think it is a great advantage that there should be discretion, trusting to the Board not to differentiate between vessels so as to injure, say, steam trawlers to the advantage of sailing vessels?—Yes, I think it is one of the good points of the Bill that it leaves that power.

810. Then, with regard to different sizes, Lord Tweedmouth asked you with regard to Scotland; but I would ask you with regard to the North Sea, how is it possible to differentiate the sizes of fish in various parts of the North Sea? How could you tell possibly what part of the North Sea the boats had caught the fish in?—You mean in connection with fixing a legal minimum size?

811. I understood you to say just now that for different points of the North Sea of England and Scotland there might be different prohibitive sizes?—Biologically, yes.

812. Then, I put the question, When the fleets go out to the North Sea, how are you to tell what part in the North Sea they have got this fish in?—It would be very difficult indeed to do that.

813. I think that would entirely put an end to those skippers' returns Mr. Doughty was so

Lord Heneage—continued.

much in favour of. The skippers would hardly like to tell us when they had been wrong?—I see the difficulty. Biologically, in order to give protection to the species, the limit might differ in different regions; but from the point of view of regulation, that might be found a very great inconvenience, as you have pointed out; and in that case it might be necessary to have a uniform size.

814. I suppose you agree with Mr. Doughty that it would be a very great advantage to get these returns for the information of the Board of Fisheries?—Yes, a very great advantage.

815. Therefore you would not like to do anything to prevent their being obtained correctly from the skippers?—No.

Lord Northbourne.

816. If the supply of eggs in one of these fish is so enormous as 200,000, what bearing has that upon the destruction of a large number of undersized fish. I mean to say the supply from that fish in the ocean seems to be so enormous, that you might almost destroy any number of undersized fish and it would not have any appreciable effect upon the whole supply?—Still, the fecundity is not the most important thing; the number of eggs produced is not the most important thing. The really most important part is the conditions to which the eggs and fry are subjected after spawning and hatching.

817. But supposing you have 200,000 eggs, what number of fish would that produce?—Adult fish?

818. Yes, actual fish?—On an average, the real number ought to be about two fish.

Duke of Abercorn.

819. Out of 200,000?—Yes; that is a general principle. Otherwise, if you had a large number you would have the sea being stocked with that species. On the assumption that the number of a species remains constant from year to year, then it follows that a male and female ought to give rise to a male and female. If they gave rise to 50, say, then that species would predominate in a few years. All the rest are destroyed at some stage in their existence.

820. Are they destroyed by *feræ naturæ*—by birds?—Yes, and storms, and so forth.

821. And disease?—Yes, and especially by other fishes.

822. Then you think that out of, say, a pair of soles or a pair of plaice, if they had 100,000 or 200,000 eggs, you would only get one more pair?—Yes, adult pair.

The Witness is directed to withdraw

After a short adjournment,

Mr. JOHN WRENCH TOWSE is called in; and Examined as follows:—

Chairman.

823. You are, I believe, clerk to the Fishmongers' Company?—Yes.

824. And have been for how long?—15 years.

825. And you are also, are you not, honorary

Chairman—continued.

secretary of the National Fisheries Protection Association, of which Lord Heneage is President?—Yes.

826. How

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[Continued.]

Chairman—continued

826. How many members are there in the Association?—About 160 individual members.

827. And how many affiliated associations?—33.

828. Where do they come from; where are the affiliated associations?—The Moray Firth, Aberdeen, North Shields, Sunderland, Boston, Hull, Grimsby, Yarmouth, Lowestoft, Whitstable, Ramsgate, Brixham and St. Mawes; and the Sea Fisheries Committees, which are also affiliated, include Northumberland, North Eastern Sussex, Devon, Cornwall, Lancashire and Western, besides that are the London Fish Trade Association, the Port of Falmouth Chamber of Commerce, the Liverpool Fish, Game and Poultry Association, and the Birmingham Fish, Game and Poultry Association.

829. They are all affiliated to you, and therefore you would speak on their behalf?—That is so.

830. You have representatives elsewhere, have you not?—We have—at Scarborough, Portsmouth, Swansea, Milford Haven, Blackburn, Manchester, Sheffield, Dublin and York.

831. You, as clerk of the Fishmongers' Company, have exercised certain statutory powers which are conferred upon that company?—Yes.

832. What are those powers?—We have the power, under charter of 2nd James I., to seize all fish in the City of London and its suburbs unfit for food. We have no power to take undersized fish, but frequently we have to clear it away from the market in consequence of its having been thrown out by salesmen and others as not being saleable.

833. Is there any quantity of that fish thrown out by the salesmen?—A great quantity. In 1900 there were 83 tons; in 1901, 49 tons; in 1902, 78 tons; and last year 47 tons. All that quantity was taken in the four months of June, July, August, and September.

834. What sort of fish are they? Are they flat fish or round fish?—Flat fish.

835. And what sort of size?—They are such a size that even the poor of London will not take them. They are useless to take home to cook.

836. How big would be the largest plaice, for instance, that would be thrown out?—Six or seven inches.

837. Is there a great quantity of those coming into the market?—At times during those months a large quantity.

838. Have you got any particulars of the price of the trunks that these fish fetch during those summer months?—Yes. I do not know whether I might just give a calculation of 100 tons of plaice.

839. Yes.—It is taken from the quantity in various trunks. Taking 100 tons of plaice, 7 inches in length, and weighing approximately 2 ozs. each, they would represent about 1,800,000 fish; whereas taking 40 plaice as a fair marketable average, weighing about 2 lbs. each, there would be only 100,000.

840. That is to say, there are nearly 2,000,000 of these small plaice against 100,000 of the sizeable fish?—Yes.

Chairman—continued.

841. What do they get for these trunks?—In May, 1903, the average price for the month per trunk, that is approximately 90 lbs., was 5s. 8d., in June 6s. 1d., in July 8s., and in August 9s. 9d.

842. And is that for small plaice only or is that the average of the plaice?—That is the average of the small plaice only. The large plaice, the good marketable plaice, are 35s. a trunk, and on a scarce market as much as two guineas.

Lord Tweedmouth.

843. Does a trunk mean about a hundred-weight?—It is scarcely that; the average is about 90 lbs.

Chairman.

844. Can you describe to the Committee the manner in which these trunks are packed? They are principally small plaice, but there are not only small plaice, there are some larger ones, are there not?—Yes, there are some larger ones. The small plaice are placed in the trunk and gradually filled up, and then towards the top larger plaice are placed.

845. What are called containing fish?—Yes, otherwise the fish being so small they would all shake out of the box, and by the time it was landed it would be half empty.

846. In an average trunk of that kind, how many containing fish would there be and how many undersized fish?—Of course it would vary, about 300 to 500, and the containing fish would be only about half a dozen, if so many.

847. It is the fact, I believe, that occasionally there are not sufficient containing fish, even in those small numbers, to go round all the trunks of undersized fish; and when that is the case it is necessary to throw overboard the undersized plaice for which there are not sufficient containing fish to make up a trunk?—I cannot, from my own knowledge, speak quite upon that point, but I know that some fish are so absolutely useless for marketable purposes that they are shovelled overboard.

848. What I want to bring out is this: Is there not, in addition to this large number of undersized fish that come into Billingsgate, a large number of undersized fish caught that do not come to market at all because there is not sufficient containing fish caught upon the same grounds to enable the trawlers to pack their trunks?—I do not know about being able to pack their trunks, but undoubtedly there is a great deal that is thrown overboard as being useless to pack at all.

849. Does the majority of the small fish come to London?—There is a good deal goes to other ports, Lowestoft, Grimsby, Hull, and Fleetwood.

850. But the number of ports to which the small fish go is comparatively speaking limited, is it not?—Yes.

851. Can you tell us what quantity do go to provincial ports?—I have a few facts here. There are no actual records kept in any port, unfortunately, as regards the small fish except at Liverpool. At Aberdeen there were 20 to 25 tons

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[Continued.]

Chairman—continued.

of small flat fish landed during last year, and all were sold at a quarter the price of good-sized fish. At Liverpool the saleable sizes seem to get scarcer every year. The total packages of flat fish undersized arriving at St. John's market from Grimsby, Liverpool, and Southport boats and from the Solway Firth for one year ending October 31st, 1901, were 11,383, averaging about 100 lbs. to each package, the fish averaging about 2 ozs. each. For 1902, in the year ending the 31st of December, there were total packages 2268, all undersized fish. The above were all sold. The amount of undersized fish arriving for the year 1903 was small, and no record was left. At present there are no undersized fish arriving in Liverpool. At Manchester it may be computed that there are 200 boxes per week, during the summer months, of undersized fish, 14 imperial stone per box—this is a different weight to the general weight I have mentioned. All are sold if they are in good condition and fit for food. At Sheffield, generally speaking, the undersized fish arriving in the market is all sold, sometimes at a very low price. The Superintendent of the Market Department states that Leeds receives 250 tons of small flat fish per annum, and fully one-fifth of the fish is sent to the destructor for manure. In Sunderland the quantity of small fish landed is very small and is all used for food; the approximate quantity is 260 cwts. per annum. In Birmingham large quantities of undersized fish are brought to the market and sold.

852. Is the quantity increasing of fish generally—?

853. Yes?—There is generally a larger supply of fish, but that is owing principally to the trawlers having to go further afield and fish in Icelandic waters.

854. Are the fish increasing in catching capacity?—No, not since the last Inquiry, in 1900. They are still catching about the same as they had then—that is the otter trawl.

855. In comparing the statistics of fish landed, are fresh kinds of fish being landed in recent years which were not formerly taken into calculation?—Yes; there are coal and catfish and roker, and skate and dogfish, hake, and such other fish now taken in and included in the statistics which formerly were considered, I will not say not edible, but they were not liked by the public.

856. It was not popular?—It was not popular; but all that fish is now taken up, and is fetching very fair prices.

857. We were told just now by Scotch witnesses who came here, that there was practically no market, or a very small market, for undersized fish in Aberdeen?—That may be perfectly true, and I have heard it myself, too. The fact is that the Aberdeen trawlers seldom go to the North Sea; they fish more in Icelandic waters than in the North Sea; but in one instance a case is given of a skipper having trawled in the North Sea and getting a very large quantity of small fish. It is stated he landed 121 boxes of small flat fish in Aberdeen, the result of eight drags of the trawl, from the Horn Reef, he having thrown overboard as useless the takings of 12

Chairman—continued.

drags. One of the boxes landed was found to contain 500 fish; the fish realised 4s. 3d. and 4s. 9d. to 10s. 6d. per box in the Aberdeen market.

858. Then there have been improved engines for capture, have there not?—Certainly, the otter trawl.

859. The otter trawl is more efficient than the old beam trawl?—Very much so.

860. Can you give us any statistics of the amount of plaice that have been brought in—their numbers and weight?—Last year the Company's inspector measured during the months of April and May, at Billingsgate, plaice from 67 trunks. These were taken at random; they were not selected. In 13 trunks there were 268 plaice of 6 inches, and the average weight 1·4 ounces; 370 plaice of 7 inches, weighing 2·08 ounces; 858 plaice of 8 inches, weighing 3·21 ounces; 1,384 of 9 inches, weighing 4·34 ounces; 713 of 10 inches, weighing 5·95 ounces; 272 of 11 inches, weighing 8·5 ounces; 123 of 12 inches, weighing 10·77 ounces; 62 of 13 inches, weighing 14 ounces; and 22 of 14 inches, weighing 1 lb. and 2 ounces, or thereabouts.

861. That is to say, the vast majority of plaice in those trunks measured 10 inches and under?—You might say 9 inches and under.

862. And of the fish what proportion in a trunk would be of those various sizes?—Of 24 trunks, the average contained 285 plaice. There were 21 of 6 inches; 18 of 7; 47 of 8; 93 of 9; 57 of 10; 27 of 11; 14 of 12; 4 only of 13; 7 of 14; and practically none of 15.

863. We have had some evidence as to the laws of foreign countries. Denmark, Belgium, and France, and, I think, Germany to a very small extent, all have legislation prohibiting the importation of fish of certain sizes?—They have.

864. England has none?—England has none; and I may mention that England really started the question as to an international conference with a view of arriving at legislative action to prohibit the landing and sale of undersized fish; but, although it was proposed as far back as 1893, nothing has been done.

865. Denmark may be said to be the leading country in legislation in this matter?—Yes.

866. Just tell the Committee what their regulation is?—In point of size it is 9½ inches, and I understand there is a proposal at the present time to amend it by increasing the size to 10 inches, and that is from the tip of the snout to the root of the tail; not to the end of the tail; so you may take that size to be 10½ inches at least.

867. Would the Danish law be acceptable, do you think, to those whose interest you represent?—I think it would be. I must qualify that to some extent, because the National Sea Fisheries Protection Association not only represent trawlers in the North Sea but the inshore fishermen, and therefore no doubt they to a certain extent would object to the large size. But then again in course of conversation I have been informed, both at Ramsgate and elsewhere that there is

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no necessity to legislate for them because they do not land those small fish.

868. I suppose you would agree with some of the witnesses who have been called before us, that the principal ground in which these small fish are found is what have been known in the course of this inquiry as the eastern grounds?—Yes.

869. And although it might be desirable to prohibit the landing and sale and the catching of all undersized fish, yet there are so many in the sea that if you could prevent the catching of a very considerable proportion of them you would have gone a long way towards protecting the fish industry?—I think so, undoubtedly.

870. And that that result could be obtained if by some means or other no more undersized fish were taken from the eastern grounds?—Yes.

871. We were told that although the great proportion of the fish that are brought home from these eastern banks are undersized, there is a certain quantity of prime fish brought home also?—Yes.

872. Can you tell us at all whether it would be worth while for trawlers to go to the eastern grounds to throw overboard the undersized fish and to come home only with the prime fish and those which were over the limit?—That is rather a question, I think, to be answered by a practical man; I can only answer from hearsay. Two companies say that it would not be worth their while to go, and a third company says it does not matter what legislation is enacted—they would go. But I think really that is a matter rather of brag than otherwise; and as a matter of fact if they were unable to sell those fish, it would, in my opinion, not pay them to go.

873. It would pay them better to go somewhere else?—Yes, it would pay them better to go somewhere else.

874. And not waste their time?—Yes.

875. You have read the Bill?—I have.

876. You are also, no doubt, familiar with the Bill of 1900?—Yes.

877. And you know the sizes which were proposed in the Bill of 1900?—Yes.

878. In your opinion were the sizes in the Bill of 1900 applicable to all parts of the North Sea?—It is generally considered that the size was rather too small; it might have been larger.

879. And can you say why the smaller size was fixed, in the interest of what class of fishermen?—In the interest of the line fishermen, and also for Lowestoft and Ramsgate and other places.

880. Therefore, if the line fishermen were not affected by the orders of the Board of Agriculture and Fisheries, under the Bill it might be possible to take a larger limit than was taken in the Bill of 1900?—I quite think so.

881. Several witnesses who have appeared before the Committee have told us that the knowledge of the habits of the fish is as yet far from complete, and that we are learning every day more about them. Do you think under those circumstances it is better to have a fixed limit under an Act of Parliament, or to give some power to a Government Department to increase or decrease the size as may be found (0.10.)

Chairman—continued.

necessary in the light of experience gained?—I think it is infinitely better to have latitude, and not to have a fixed limit. You may take as an instance Denmark, where it is shown that the law was so beneficial in the fishery interest that they consider it desirable to increase the size limit. I may also instance the Act of 1877 with regard to crabs, lobsters, and oysters. Both in regard to crabs and lobsters, I do not think there would be any difficulty now in having the minimum size increased, because the fishermen see that it is more beneficial to them.

882. And you think it is quite possible, then, that if a small limit were fixed by order of the Board of Agriculture and Fisheries to-day, in accordance with the wish of the trade, after a few years' time the trade itself might come and demand to have a higher limit fixed?—I am quite of that opinion.

883. And that could only be done, of course, by further application to Parliament if it were fixed by an Act?—Yes.

884. It may be said, of course: If this is the opinion of the trade why do they not impose upon themselves a self-denying ordinance and avoid going to those banks altogether?—If your Lordship had been present at the various discussions of the National Sea Fisheries Protection Association you would have heard representatives ask to be defended against themselves. At one time they more or less entered into a compact not to go to certain grounds, and they loyally carried it out up to a point. One of them, thinking perhaps there might be a few more fish there and there might be a good haul, ventured out and realised his expectations. Upon that becoming known to his confrères they each went, and the compact then, of course, fell through.

885. Am I to understand that no instructions have been given to captains as to where they are to go by the managers of the companies? Are the captains given a free hand?—No, they are given directions by the managers of the companies.

886. Have you any knowledge of the market that there may be on the Continent for undersized flat fish?—No, I have not.

887. You have made no enquiries?—No.

888. Would it be looked upon as a hardship if it was not worth while for these trawlers to go to the eastern grounds and yet foreign trawlers went there and caught fish?—I must correct the answer I made just now. I have heard that there is no demand for undersized fish on the Continent.

889. Therefore your association is not seriously afraid of a repetition of what takes place in the Moray Firth, where, while British trawlers are prohibited from going there, foreign trawlers come and catch the fish and sell them in the English market?—Not at all.

890. It would be perfectly possible, of course, under the Act, to prohibit landings from all foreign vessels of all kinds of undersized fish?—Certainly.

Duke of Abercorn.

891. I suppose you approve of this Bill?—I do.

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892. And

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[Continued.]

Duke of Abercorn—continued.

892. And you think it is a Bill drawn on the lines that would be most efficacious in preventing the destruction of undersized flat fish?—I think it is the best Bill I have seen drawn for a very long time.

893. I suppose from your knowledge you are aware that an enormous number of these flat fish are now destroyed?—Yes.

894.—Can you tell me of those which happen not to be destroyed but are brought into the various ports of London, for what purpose they are used? For instance, in London is there any demand for these small fish as an article of food?—They are taken by the fried fish shops, but even in that case there is no great demand for them, and if they are too small they are what is called married in batter and sold in that way, but even the poor object to take them.

895. There is no flesh on them?—No flesh on them.

896. Being 6 or 8 inches only there could not be much to eat off a flat fish of that size?—No.

897. That being so, it would not interfere at all with the consumption of food by the general public if there was a prohibition placed upon the introduction of these fish into this country?—Certainly not.

898. In fact there would be a gain hereafter if those fish which are now destroyed were allowed to mature, and become a source of breeding for the production of a larger amount of fish of the same kind?—That is the general opinion, that given facilities they will grow, and that there would be a greater return.

Marquess of Huntly.

899. You said that there was restrictive legislation in France. I thought we had evidence that there was no legislation?—It is not effective. I think there is restrictive legislation in France, but it is not effective.

900. How far does it go, do you know?—I do not think really that there is much attention paid to it; it is rather a dead letter, I understand.

901. Then that is what we understood before, but there is nothing like the limit there is in Denmark of 9½ inches?—No.

902. Supposing there was an international convention amongst the North Sea Powers not to use these eastern grounds during the breeding season for small fish in the months of March, April, May, June, and July, do you think France would agree to that?—If France agreed, I am quite confident Germany would not.

903. And you do not see any prospect of either of those two countries joining an international convention?—Certainly not. I think it has been stated publicly that Germany is not prepared to enter into any international fishery agreement.

904. It would be rather risky, would it not, if certain countries went into legislation to prevent these fish being taken from these grounds or landed, and then the other countries that did not come into the convention went and used these grounds?—You see they are principally on their own grounds as it were, and I think they would rather wish to protect their own country.

Marquess of Huntly—continued.

905. But take France, is there not a danger of the French trawlers going along these eastern grounds and fishing there when the English trawlers leave?—There might be a slight danger, but the proportion of trawlers is very small.

906. You do not think there would be any good in trying to get all the Powers to agree?—You might try.

907. If you are not sanguine I am not.

Lord Tweedmouth.

908. As a matter of fact, Denmark is the only country that has got any real effective limitation?—Yes.

909. In the other countries, even where there are limitations, the size limit is so low that to all intents and purposes it might just as well not exist?—Precisely.

910. Does the Denmark limit include any other fish except plaice?—Yes.

911. It includes all flat fish?—Yes.

912. You said that owing to the great benefits that have arisen from the enforcement of the Danish limit, they were about to raise the limit to 10 inches?—So I have been given to understand.

913. Which would mean really more than that by 1½ inches, from the measurement being from the snout to the root of the tail instead of to the end of the tail?—Yes.

914. Can you at all tell us how that great benefit was shown—what proof you have of the benefit that has resulted from it in Denmark?—No, I cannot. I have not been told that, except that they realise that there is a benefit.

915. But you cannot tell us what? That is rather important.—No, I cannot, unfortunately.

916. Then your company do seize an enormous number of fish in the London market every year—bad fish?—Yes.

917. Can you at all tell us what proportion the undersized fish in that quantity bears to the whole?—I gave that in my evidence before the Committee of 1900. You will find it at Question 354. I was asked then: "Can you give us those particulars you were about to give us about the quantities you have dealt with?" And my answer was: "In 1893, there were 50 tons in June. In that month we seized 164 tons and in that is included this 50 tons of undersized. Therefore, it is 30 per cent. of the whole of the amount seized. In May, 1894, there were 42 tons taken, or 35 per cent. of the amount. In June, 1894, there were 27 tons, or 23 per cent., all plaice."

918. One cannot go into great exactitude, but speaking quite generally, would you think that of the fish you seize as being bad in the market nearly 30 per cent. is represented by undersized fish?—During those months, May, June, July and August.

919. You do not find any great quantity of undersized fish in the other portion of the year?—Not to such an extent; the small fish is principally in those months, May, June, July and August.

920. Does that arise at all from the fact that in those months, which are the hot months of the year, the undersized fish go bad more quickly?—

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quickly?—It has nothing at all to do with the condition. This seizure is rather made to take the undersized fish off the market at the time that I have made returns for, and is in consequence of the fish being left on the market as unsaleable though good.

921. Would you seize fish that is good then?—No, we take that.

922. To prevent its getting bad?—Yes. All the fish that we take generally is of course unsound, unfit; but there is other fish during these months which, owing to its small size, is unsaleable, and therefore it cannot be got rid of, and the merchants throw it out in the market and our meters have to take it up, because in an hour or two or within a few hours it would go bad; but when it is thrown out it is perfectly good, and anybody might take it? but no one will—it is not of sufficient size to repay them the time and trouble of cooking.

923. That is my point, you take it to save its going bad, in fact?—If you put it in that way.

924. Then do you dispose of that in the same way that you do of your bad fish?—Yes, it is all thrown away together and destroyed.

925. Can you roughly say what is the proportion of undersized fish that you get there to the amount that is sold and used; I understood you to say that a considerable quantity was sold and used?—No, there are no means of arriving at that. We have been endeavouring to get statistics in regard to that, but we have not gone thoroughly into it. In fact, we have not been sufficiently long to give you any good idea.

926. Still a considerable amount is marketed and used?—Yes. I may say that it depends upon whether there is a full market or a scarce market.

927. Naturally the worst quality goes last?—Yes.

928. If there is a short supply you use up the whole?—Yes.

929. You were speaking about the comparative catching power of the otter trawl and the beam trawl. Is not the greater catching power of the otter trawl principally shown in its catching round fish?—I do not know that it is so; but I am sorry to say I am not sufficiently experienced to give you a decided answer.

Lord Heneage.

930. I only wish to ask about three questions. The trade have, as a whole, through the Sea Fisheries Protection Association, supported every one of the Bills since 1895, have they not?—Yes.

931. Unanimously?—Unanimously.

932. There has never been any change of opinion amongst them with regard to the necessity of stopping the landing and sale of undersized fish?—No, they are of the same opinion to-day as they have been for years past.

933. In February last they discussed this Bill?—They did.

934. And the Executive Committee discussed this Bill, and in principle they agreed to support it?—Yes.

935. And to send witnesses before this Committee. You have arranged for witnesses to

Lord Heneage—continued.

come from various ports to give evidence in favour of the Bill?—Yes.

936. There were only two doubts expressed: one was on the advisability of differentiating between steam and sailing vessels?—Yes.

937. There was a good deal of discussion on that point?—Yes.

938. And the other was as to the prohibition of landing only being effectual?—That was so.

939. Those two points were the two points on which there was considerable discussion and some difference of opinion; but with regard to the principle of the Bill as an enabling Bill giving power to the Department with elasticity, they were in favour of this Bill?—Absolutely in favour of it. As you mentioned, there was considerable discussion upon those other two points.

940. Can you tell me who the witnesses are who are coming for the Board of Trade?—Mr. Hellyer, Mr. Alward, Mr. Pibel, and Mr. Irvin of Aberdeen.

Lord Northbourne.

941. Is Billingsgate the largest fish market in England?—Yes.

942. Larger than Grimsby?—Yes, undoubtedly.

943. You have statutory power to destroy fish which is unfit for human food now, have you not?—We have.

944. Under what Act of Parliament have you that power?—The 2nd James I.

945. Has it not been amended in recent years?—No.

946. It has continued from that time to this?—Yes; in fact that charter of James I. was a confirmation of previous Charters. We have had power to condemn fish from the time of Edward I.

947. Do you do that now through the police or through inspectors, or how?—Through inspectors of our own.

948. And you pay them?—Yes.

949. How many have you?—Four or five.

950. Are any of these undersized fish unfit for human food?—In what way do you mean—deleterious.

951. No, not quite that, but from an entire absence of flesh and generally?—Yes, there is nothing to eat.

952. They are hardly worth consumption?—No; that is so. There is nothing there but bone. By the time you have taken the head and tail off and the bone there is nothing left.

953. Where do they go to. Where are they sold?—A good deal is thrown away even when they go to the fishmongers.

954. Where are they thrown to? Are they used for manure?—There are two contractors—there may be more—but there are two principal contractors who clear refuse from fishmongers' shops in London, and, no doubt, the same principle exists in other towns as well, and this undersized fish is thrown in the tub and taken away by the contractors to their manure manufactory.

955. Do you think that to carry out the provisions of this Bill it would require a large staff of officers?—I do not think eventually it will require such a large staff. There are only certain fishing ports, and in those ports, if there are

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Mr. J. WRENCH TOWSE.

[Continued.]

Lord Northbourne—continued.

officers to whom sufficient power is given, all the fish will be stopped. It cannot be forwarded by train.

956. But supposing they pack a large number of undersized fish in boxes and cover them up with larger ones, you would have to unpack every box?—You see, at the port of landing the fish is generally sold, and the purchaser for his own protection would see that he was buying a good-sized fish; and in most cases if he is not satisfied he puts his hand in and he dives in the box, or he even has the box turned out. Therefore I do not think that any appreciable quantity would get beyond the port.

Chairman.

957. This legislation you said just now has been of long pending. Do you think the trade would be willing to wait an indefinite period for legislation on the subject?—I think they are getting very tired of having to wait so long.

958. Even supposing this Bill were not in all respects exactly what they would wish, do you think they would rather have it than wait until we could get an international conference to prohibit trawling in these areas?—They are of opinion that until the English Government legislates it is impossible to obtain any international agreement.

959. And, therefore, we must set the example—We must set the example.

960. At this meeting which Lord Heneage spoke of, was there any serious apprehension lest the Board of Agriculture and Fisheries should exercise the power of making orders in a manner detrimental to the fishing industry?—No.

961. They were prepared to place the same trust in the Board of Agriculture and Fisheries that farmers have placed in it in the administration of cattle diseases under the Cattle Diseases Act?—Yes.

Duke of Abercorn.

962. You represent a very large number of associations who are interested in the sea fisheries of this country?—Yes.

963. Are they generally or unanimously of opinion that some legislation should be enacted in order to stop the destruction of these undersized fish?—They are unanimous I may say.

Marquess of Huntly.

964. Our experience in the Moray Firth has not been very encouraging as giving a good example to foreign nations. We close it to our own and open it to foreign trawlers?—That is so.

Lord Tweedmouth.

965. But do you not also know that most of these so-called foreign trawlers in the Moray

Lord Tweedmouth—continued.

Firth are really British trawlers sailing under a foreign flag?—That is not the question, is it?

Chairman.

966. Might I ask you then whether, in your opinion the foreign trawlers would continue to fish in the Moray Firth if they had not the opportunity of selling their fish in England?—Well, I do not know; I rather doubt it. Of course, at the present time they are able to sell their fish in England, though not in Scotland.

967. But I say, do you think it would be worth their while to come to the Moray Firth to fish if they had to take their fish back to their own country?—I doubt it very much. I do not think it would.

968. Do you not think that under the Bill now before the Committee, the Board of Agriculture and Fisheries would be able to make such Orders as would prevent the sale of undersized fish brought into this country by foreign vessels of any sort or kind?—That is what I apprehend.

Lord Tweedmouth.

969. Do you not think it would be possible for Parliament to take the responsibility of fixing a limit of size for these fish, to apply to the whole of Great Britain?—I think that this enabling Bill would be very much better if Parliament would only pass it, because if hereafter, as in Denmark, you find your limit is too small, you would then be bound to have fresh legislation; whereas, if this Bill were passed, it would be in the power of the Board of Agriculture and Fisheries to vary the size as experience would dictate.

970. Do not you think it would be possible to fix a maximum limit, leaving the authorities here power to reduce it if they thought necessary?—Oh, no doubt; but is there more chance of passing such a measure in Parliament than you have in the proposed Bill? Is there not a greater chance of the proposed Bill passing than of having a rigid limit.

971. Now you are asking me a question. But to go to another point: do you not think that there is likely to be some difficulty if you have different-sized limits fixed in different parts of Great Britain, as you probably would have under this proposal?—I did not apprehend that there would be various sized limits fixed; I anticipated there would be one size.

972. Scotch witnesses to-day distinctly suggested that whilst one limit would be very good for Scotland on the east coast another would be suitable for the west coast of Scotland and another one for England?—I am afraid that that would not meet with the approval generally of the trade. I do not see how it could—I think it would be very unfair.

The Witness is directed to withdraw.

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Mr. HAMON LE STRANGE.

MR. HAMON LE STRANGE, is called in; and Examined as follows:—

Chairman.

973. You are Chairman, are you not, of the Eastern Sea Fisheries Joint Committee?—Yes.

974. What area do your operations cover?—We go from Donna Nook, just south of the Humber, down the rest of the Lincolnshire coast, round the Wash and along the north coast of Norfolk, and at present stop at Happisburgh Lighthouse. It is about, roughly, 100 miles in length, taking it round the Wash.

975. South of you is there another Fishery Committee?—No, there is an unfortunate gap till you get beyond Lowestoft.

976. You have seen the Bill?—Yes.

977. You observe that it proposes to give power to the Board of Agriculture and Fisheries to enact bye-laws in the same manner as powers are given to the Sea Fisheries Committees?—Just so.

978. That would enable the Board of Agriculture and Fisheries to make bye-laws in that area south of you where there is at present no Sea Fisheries Joint Committee, would it not?—I take it that it would.

979. Do you think it would be an advantage to fill up these gaps in that way?—I think it would be of very great advantage to fill up that gap; that is the only gap left on the English coast, I believe.

980. You, I presume, represent the interests less of the deep sea trawlers than of the coast fishermen?—We have both in our district; there is a considerable number of deep-sea trawlers at Boston.

981. But they go out beyond the three-mile limit?—Yes, as steam trawlers.

982. But your bye-laws can apply only to the three-mile limit?—That is so.

983. Are the interests identical of the inshore trawlers and the deep sea trawlers?—No; very often they are conflicting; very often the restrictions asked for by the deep sea trawlers are objected to, perhaps on what might be thought insufficient reasons by the inshore fishermen.

984. Then do you think it would be somewhat difficult to have an Act of Parliament which would apply a hard-and-fast rule to both those classes?—Yes, I think it would.

985. It would be a great advantage to have some elasticity which would enable you to exempt from the regulations the deep sea fisheries on the one hand and the inshore fishermen on the other?—Most certainly. Even in my own district we have four sub-districts with different byelaws applicable in some of them, for those reasons.

986. Is there much landing of undersized fish in your district?—Yes, there is a good deal, not all within my district, but there is a great deal of undersized fish caught within the district and landed at Grimsby. Complaints have been made to our Fishery Inspector by the trade and the people at Grimsby, of the number of undersized fish landed there, which are destructive to the interests of the trade itself.

Chairman—continued.

987. Can you give us any particulars of the value of undersized fish landed in that way?—I cannot give particulars as to the actual fish landed, only general details. Our own inspector, in one of his reports to us in March, 1902, stated that he had on many occasions had his attention drawn to the large quantity of small fish landed by the deep sea trawlers, and he gave the following as a sample of recent market reports: "The greater portion of the extension pontoon (Grimsby) was taken up almost wholly with small plaice, thousands of trunks being laid out for sale. Some twenty trawlers were landing on this section of the market, and fourteen of them had only a very small proportion of other kinds of fish. Small plaice were everywhere, the catches running from 200 up to 500 boxes per vessel. Naturally prices dropped to such an extent that the voyages would scarcely cover expenses, only the best quality and the last hauls making anything like a price." From another source: "Our Grimsby correspondent reports extraordinary landings of immature plaice, small fish that must have saddened the hearts of those concerned for the welfare of the fisheries. This week, indeed, several of the markets—Billingsgate, Grimsby, Lowestoft, Birmingham, &c., have been flooded with small plaice, which was practically worthless, even to fryers. At Billingsgate the miserable stuff could not be cleared at 9d. a stone. Then the manager of a fleet of steam trawlers at Boston supplied our inspector with particulars of a catch obtained from the neighbourhood of the Borkum—coast of Germany.

988. That is what we know on this Committee as the eastern grounds?—Yes. "The catch consisted of 225 kits (281 cwts.) of fish" (each of 2,814 fish), "180 kits (225 cwts.) of which were small plaice. In one kit 515 fish were counted, this multiplied by 180 makes the total small plaice landed from the vessel 92,700. The skipper of the trawler was of opinion that he threw considerably more fish overboard than he kept, and he agreed that a fair estimate of what he took on board in the first instance would be about 270,000 to 280,000. At an average weight of three pounds each fish, this number would be equivalent to 5,560 kits (6,950 cwts.). The 180 kits of small plaice landed realised 58*l*. If they had been mature plaice they would be worth on the present average price 14,000*l*. The above particulars are only those of a single trip of one trawler."

Lord Northbourne.

989. What are you quoting from?—I am quoting from a report made to my Fishery Committee in the semi-annual report made by our own inspector every half-year. I can put in the report itself. It is two years old now.

Chairman.

990. It has been suggested to the Committee that it might be possible to deal with this question

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Mr. HAMON LE STRANGE.

[Continued.]

Chairman—continued.

tion by way of regulating the mesh. Have you had any experience of regulating the mesh?—Our committee passed a bye-law for regulating the mesh, which was proposed to be made applicable in one of the four sub-districts into which we are divided, being the only one it applied to. It was objected to when it came before the Board of Trade by fishermen from other parts of the district, and it was not allowed by the Board of Trade.

991. Do you know the grounds upon which it was disallowed?—It was chiefly objected to by the Lynn and Boston fishermen, who reside miles away from the district and really had no particular interests so far as we could see. One of their objections, I think, which they attempted to convince the holder of the local inquiry of, was that a large mesh injured more fish than a small one did, and they gravely asserted that.

992. Generally your Committee agree with the National Sea Fisheries Protection Association, that legislation on this subject is eminently desirable?—They do.

993. Have they considered this particular Bill?—Not as a committee.

994. But so far as you know you have not heard any objections to it?—I have not had any opportunity of hearing objections to this particular Bill.

995. Personally, do you approve of it?—I think it is very much wanted.

996. As compared with the Bill of 1900, have you any observations to make?—I think the elasticity of the present Bill is very much in its favour. I can only speak really of the districts that I know, but even in the small limits of those districts, as I said just now, we have been obliged to put in force a certain amount of elasticity; and if that is the case for a district consisting of 100 miles of coast, I think it must be very much more required if a Bill is to be passed for the whole territorial waters of the kingdom.

997. Are you a member of the County Council?—Yes.

998. You know the operations, probably, of the Board of Agriculture in connection with Animals' Diseases, the Orders that are made under the Board of Agriculture?—Yes.

999. Has that generally met with approval by the local authority?—I believe so. I have never been a member of the Cattle Diseases Committee.

1000. But you have not heard any outcry against any arbitrary action under the Orders passed by the Board of Agriculture?—No, certainly not.

1001. Therefore you would be inclined to think that fishermen might equally trust to their sense of what was necessary for the fishing trade?—Certainly.

Lord Tweedmouth.

1002. How would this Bill affect your own fishermen? After all, your evidence has been entirely about the deep sea trawlers, who are really outside your jurisdiction altogether. Those figures you have been giving us the landings of deep sea trawlers and not from

Lord Tweedmouth—continued.

fishing that has been carried on within your limits?—Not all of them; some of the particulars given referred to undersized fish captured within the limits of our jurisdiction; in fact, I may almost say the whole of the territorial waters in our jurisdiction are the nurseries of these fish.

1003. I quite agree—the Wash especially—I know it well. But what I want to know is how does it affect the fishermen who at present fish in those areas?—I think it is possible that they might at first think it would affect them adversely, as they did when our committee was at first established. We had the fishermen against us at first. Now we have nearly all the fishermen with us.

1004. Have you any bye-laws with regard to those in your limits, passed by your district committee?—With regard to the size of the fish, do you mean?

1005. Yes?—Not flat fish, no; for shell fish we have.

1006. Or any regulation with regard to the mesh of nets?—We tried to get a bye-law with regard to the mesh, but it was not allowed by the Board of Trade.

1007. Can you tell me at all what the average size of the flat fish taken from your waters that are landed and sold is at this moment?—I do not know how to strike the average.

1008. There is a good deal of fishing in the Wash?—Yes. Chiefly trawling for shrimps.

1009. What I want to arrive at is is: do the fishermen who fish in this inshore water catch a great quantity of small flat fish?—Yes; you cannot draw a trawl for half an hour there without catching buckets full of fish, dabs as long as your thumb nail.

1010. And by whom are those fish caught: is it trawlers with a small trawl?—Most of them are caught by shrimpers. In the Wash itself there is very little trawling for flat fish. They do not go trawling for flat fish. They trawl at other places where there are more soles found, up the Lincolnshire coast. In the Wash there is a great deal of shrimping, which necessitates a very small mesh, and we have had to make bye-laws obliging them to lift their trawls out every half hour so as to let out these immense quantities of small flat fish caught in the poke, or bag, of the net.

1011. Supposing a 10-inch limit were put on plaice and soles, would it interfere a great deal with your fishermen?—Not at all.

1012. They would accept it, would they?—I do not like to speak for fishermen as to what they would accept?

1013. But then, as I understand, one of the ideas of this Bill is to enable fishermen of that class to be exempt from the provisions of the Bill, that the Bill is only to apply to the deep sea fishing net?—If it is only to apply to the deep sea fishing net, it would not touch any local fishery at all.

1014. I know. I am saying, supposing it was made to apply to your local fisheries, would your fishermen accept it or would they consider it taking away their means of livelihood?—I think the majority would accept it. I think very many

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Mr. HAMON LE STRANGE.

[Continued]

Lord Tweedmouth—continued.

many of them not in the least know what an 8 or 10-inch fish is. If you show a man an 8-inch fish and ask him the size of it, he will always call it a 9-inch fish.

Duke of Abercorn.

1015. It depends upon whether the measurement is to the root or the end of the tail?—They habitually over-estimate the size.

Lord Tweedmouth.

1016. What I mean really is this: Supposing there was a 10-inch limit, would that so diminish the number of fish they can bring into the market, that it would materially injure their means of livelihood?—I think perhaps 10 inches would; 8 inches has been spoken of as the limit for soles.

Marquess of Huntly.

1017. Then you approve of the Bill being developed so that it would prevent all fishermen landing these small fish within the territorial limits?—Yes.

Duke of Abercorn.

1018. I think you stated that one trawler landed undersized fish which fetched 50*l.* in the market?—A catch off Borkum 58*l.*, if they had been mature plaice it would have been 14,000*l.*

1019. On what basis is that calculation made?—I suppose that is on the basis, which is an utterly impossible one, that if every individual of those who made the 58*l.* lived to become mature fish, the value would have gone from 58*l.* to 14,000*l.*

1020. But I do not suppose any trawler brought in fish to the value of 14,000*l.*, otherwise all these fishermen would be millionaires?—An enormous percentage of fish must necessarily die in the struggle for life.

1021. You were taking a general calculation, that if these fish had been allowed to live their value hereafter when they would have been caught would have amounted to about 14,000*l.*?—So I am informed by the Fishery Inspector.

Chairman.

1022. Is there anything else you wish to say?

Chairman—continued.

—Would it not be advisable that Clause 1, Sub-clause (3) of the Bill should include officers of the Sea Fisheries Committees as persons empowered to carry it out?

1023. In your opinion that would be advisable?—Yes, in my opinion it would be advisable. In them you have your constables ready made to your hand. The clause says: "Any officer of Customs or any officer appointed in that behalf by the Board of Agriculture and Fisheries or by the Fishmongers' Company or by the Council of the County or Borough in which any fish is landed." That clause does not include the officers of our sea fishery districts.

Lord Tweedmouth.

1024. Except that they might be appointed under that?—But they are not appointed by the County Councils.

1025. But they might be?—I suggest that they should be appointed here.

1026. It provides for anybody who is appointed; there is nothing to exclude them?—Yes, but would you not put them in *ipso facto*?

Chairman.

1027. Is it not a question as between our two old friends "may" and "must"? You want to put in they *must* be, and the Bill says they *may* be?—I was afraid you would leave them out, perhaps.

1028. I think there is nothing in the Bill to prevent their being appointed?—I wish to call attention to the fact that you have your officers ready made to your hand there in men accustomed to the work.

1029. We shall be only too glad to avail ourselves of ready-made officers. There is only one other question I should like to ask you with reference to the fact that you have your officers ready made to your hand there in men accustomed to the work.

1030. In fact the matter could be proceeded with tentatively?—Yes.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned to Thursday next, at eleven o'clock.

Die Jovis, 10^o Martii 1904.

PRESENT :

Marquess of ABERCORN (Duke of ABERCORN).
Earl of ONSLOW.
Earl of YARBOROUGH.

Lord MELDRUM (Marquess of HUNTLY).
Lord TWEEDMOUTH.
Lord NORTHBOURNE.
Lord HENEAGE.

THE RIGHT HON. THE EARL OF ONSLOW, G.C.M.G., IN THE CHAIR.

THE REVEREND WILLIAM SPOTSWOOD GREEN is called in; and Examined, as follows:—

Chairman.

1031. You are Chief Inspector of Fisheries under the Department of Agriculture and Technical Instruction for Ireland?—That is so.

1032. May I ask you generally whether the Department has considered the Bill which is now before the Committee?—Yes, we have.

1033. May I take it generally that Sir Horace Plunkett is in favour of the Bill being made to apply to Ireland?—Generally.

1034. You have certain powers, have you not, already?—We have. Our powers are defined in 32 Acts of Parliament.

1035. Do they extend beyond the 3-mile limit?—Yes, they have been held to do so. — — —

1036. What powers have you outside the 3-mile limit?—Under the Steam Trawling Act, 1889, we have power to make byelaws prohibiting trawling round the Irish Coast within the 3-mile limit, or within any defined area.

1037. Does that apply to vessels sailing from ports other than Irish?—It applies to all British ships. I might say that the validity of that power has been tested before the Court of King's Bench in an appeal.

1038. Are the areas defined by byelaw?—The areas are defined by byelaw.

1039. You have no power to prohibit the landing or the sale of fish of any particular size, have you?—I do not think we have.

1040. What is the extent of the industry in Ireland?—There are nine steam trawlers fishing from Dublin, and they land something over 3,000 tons of fish per annum; and then there are a number of sailing trawlers working all round the coast. Galway and Dingle are the two chief centres; but put together, they do not land more than about 500 tons of fish.

1041. Have you taken any statistics as to the size of the fish landed?—We have not hitherto, but our Scientific Department is at present
(0.10.)

Chairman—continued.

attending to that, and Mr. Holt, our scientific adviser, is here.

1042. Do the English trawlers that trawl in the Irish waters land any fish in Ireland?—As a rule they do not. It is only merely accidentally, I might say, when they land any fish in Ireland; as a rule they land the fish caught off the Irish coast in Milford or Fleetwood.

1043. What is the outside limit that Irish trawlers would go to fish away from the Irish coast?—Some of the trawlers fish right away up North, off the Scotch coast, off the Scotch islands; but as a rule they do not go very far; they do not as a rule make weekly trips; they make half-weekly trips, because the fish market in Dublin requires fish delivered ungutted, and so they have to come back twice a week.

1044. Therefore they none of them probably would go to the Danish coast round Heligoland?—None of them go to the Danish coast.

1045. And if the Orders of the Board of Agriculture and Fisheries were framed solely with a view of preventing vessels from going to those Danish coasts, it would not be necessary to apply them to Ireland?—There is not the slightest necessity.

1046. On the other hand, would it be of some assistance to you in enforcing your byelaws, if this Act were passed?—It might be. At the present moment we have dealt with the landing of small fish in a different way.

1047. The landing or the catching?—The landing; that is to say, we have made byelaws regulating the size of the mesh, with a view to protecting small fish. That does not apply to trawling.

1048. But is not that rather a byelaw regulating the catching than the landing of the fish?—The nets in the case of which we limit the size of the mesh are nets used from the shore,
H so that

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The Rev. W. S. GREEN.

[Continued.]

Chairman—continued.

so that in the catching the fish are naturally landed.

1049. Supposing that vessels were prohibited from landing undersized fish in England, would you think it undesirable that there should be a market for them in Ireland?—That is our real reason for wishing to support the Board of Agriculture and Fisheries in this Bill. It did strike us that if this law existed in England, we should be put in a position to help them in making such regulations as would prevent these undersized fish being landed in Ireland.

1050. What statutory powers have county councils in Ireland to deal with fishery matters?—None that I know of with regard to sea fisheries.

1051. In that respect they differ from the English counties?—I think so.

1052. Do you consider it desirable that the same powers should be granted to county councils in Ireland as the Bill proposes to give to the county councils in England?—I think it is unnecessary, and I think it would lead to complication; and, furthermore, I do not see the necessity of putting upon the counties the levying a rate which this would necessitate.

1053. Then you would prefer to see an amendment in the Bill to that effect?—I think so; it would simplify matters.

Lord Northbourne.

1054. What are the two ports you say chiefly in Ireland where these fishing vessels went from?—Those are sailing trawlers, Galway and Dingle.

1055. Where is that?—Dingle is in Kerry.

1056. What number of trawling vessels have they got at both those places?—There are about 18 in one and 20 in the other.

1057. Are there any steam trawling vessels there?—No; but steam trawling vessels fish off that coast, coming from England.

1058. Off the west coast?—Off the west coast.

1059. Where do they land their fish?—Either in Milford or Fleetwood or Liverpool.

1060. They do not land them in Ireland?—No.

1061. I do not suppose this Bill would very largely affect Ireland, would it?—No, it would not; the probability is that we would not feel it necessary to make any rule or regulation under this Bill; except it might be to assist the English authorities in enforcing the law.

1062. What sort of regulation could you make in Ireland to assist the English authorities in enforcing the law?—If it came to pass that vessels could not land small fish in England, and they came and dumped them in Ireland, we could then of course make an Order under this Bill which would stop that business.

1063. Has this particular proposal with regard to the prohibition of the sale of undersized fish come much under your notice?—It has not, because it is not important in Ireland.

1064. I suppose your duties are to a certain extent of a scientific character and general investigation?—Certainly that is part of the duty of our staff.

Lord Northbourne—continued.

1065. Have you come across it in that way?—We come across it in matters of statistics, and we come across it in all our business.

1066. Then it is your opinion that for the benefit of the English fishing industry something of this kind should be passed and carried out?—From what I know of the fishing in the North Sea—I know very little about it, and therefore I do not like expressing an opinion—but it seems from what I have heard of late that it is a desirable thing for protecting the fisheries of the North Sea.

1067. What have you read about it; was it generally, or in your scientific study?—Both.

Lord Heneage.

1068. So far as Ireland is concerned, this Bill would be immaterial to them?—Yes, quite immaterial.

1069. Your fishermen do not go into the North Seas very much?—They do not.

1070. But you would not be averse to the Orders under this Bill being extended to Ireland for the protection of the trade generally?—We would not object to that, provided that the few small details we wish to have altered in the Bill are altered; there are one or two things.

1071. It would not be injurious to Ireland, in your opinion, to have Orders made under this Bill? I do not say exactly the same Orders as in England.—No.

1072. For the prohibition of landing?—No; giving the Irish authority the power. It would not be in any way injurious to us to make the Orders.

Lord Tweedmouth.

1073. Do you see the fish that are landed in Dublin?—I do not, except when I buy one.

1074. You never go down to the quays?—I have done so occasionally, but not as a rule.

1075. Is there any inspection of the fish that are landed?—Yes, there is. We have a special weekly report from the head of the market in Dublin, who gives us complete returns of all the fish landed, and comments on their size when there is anything special to report.

1076. And do you get a record of the size of the fish at all?—No, we have not attempted that.

1077. Do not you think it would be an advantage that you should?—We do get occasionally reports of small fish being landed, and we make investigations then to try and locate the small fish; but we have not attempted it in any systematic manner, because so far it does not seem to be of any great importance.

1078. Do you often have reports of the landing of undersized flat fish?—Every year there are a few reports of the sort coming in to us.

1079. What class of fish are mostly included in the undersized ones?—Undoubtedly a large number of dabs are included, and there are a certain proportion of small plaice landed.

1080. A great quantity of dabs never do grow to a large size, anyhow?—No.

1081. It is hardly fair to talk about undersized fish when you refer to dabs, is it?—Several times we have had reports made to us that a lot of

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[Continued.]

Lord Tweedmouth—continued.

lot of small plaice were being landed, and when we investigated it we found the bulk of the fish consisted of dabs.

1082. Is there a market for dabs in Ireland?—Yes, in the poorer parts of the towns.

1083. With regard to these nets that you regulate the mesh of, what class are they?—The byelaws we have made refer chiefly to nets called wade nets, which are used on the flat shores of the east coast. We have also made similar byelaws on the north-west coast. These nets are fished in very shallow water, where a number of small fish are caught, and Mr. Holt, our scientific adviser, went down to see these nets being worked, and he can probably give some information as to the amount of fish he saw killed. But these nets are very few in number, and they are so few in number that it does not seem to us worth while to make rules and regulations about things which are of so little importance.

1084. Then briefly, what you say, I take it from your evidence, is that so far as Ireland is concerned, you do not consider that the Irish fisheries have been injured up to the present time by any destruction of undersized fish?—Not appreciably.

Duke of Abercorn.

1085. Do you say there is much capture of undersized fish along the coasts?—I do not think there is. There are a few places, undoubtedly, where fishermen fishing in a small way catch undersized fish, and it has come under our notice on several occasions that it might be desirable to make a byelaw regulating their action; but when we have investigated it we have found that, though they were killing small fish, it would undoubtedly stop them fishing altogether if we made any rule or regulation about it; and the matter is on such a small scale that we did not wish to stop a fishery going on, in which a number of people were making a living, for a hypothetical good.

1086. Then you have the power of making these byelaws in Ireland, have you not?—We have the power of preventing the catching of small fish by closing certain areas against fishing, where we think small fish predominate, and we also have the power to regulate the mesh in these wade nets; and we have made several byelaws regulating the mesh of the wade nets for that object.

1087. By closing the area, do you mean closing the area entirely, or only for a certain number of months in the year?—Some of these areas have been closed for a certain number of months; some have been closed for all the year.

1088. Have you any knowledge about the capture of undersized fish, say for instance in

Duke of Abercorn—continued.

Lough Swilly?—Yes, there are a number of small trawlers worked from Buncrana, and they catch small flat fish undoubtedly; but the boats they have are too frail to go out into the open sea, and if we stopped them fishing in the upper part of the lough, we would practically put an end to their industry altogether.

1089. I suppose the same might be said about Sheephaven Bay, where there is a large amount of fish?—In Sheephaven Bay there is a very important herring fishery, and the trawling in Sheephaven Bay seemed to tend—at least it was the general belief that it tended—to disturb the herrings when they were settling down in the bay, and so we prohibited trawling in that bay altogether.

1090. There is no trawling allowed now in Sheephaven Bay?—No steam trawling.

1091. I was more lucky myself years ago when I trawled there.—Steam trawling is prohibited there.

1092. Do the Ringsend boats catch many undersized fish?—They catch some undersized fish, but they do not catch any great number. All trawlers catch a certain number of undersized fish—I think that may go without saying—and they catch their proportion, but it is not worth considering, in the majority of cases.

1093. Are these undersized fish used as food in Ireland, or thrown away, like they are mostly in England, for the purpose of manure?—Small fish are sold in the towns.

Chairman.

1094. I take it that there would be no danger that the Irish Department of Agriculture and Technical Instruction would put this Bill into operation in any way to interfere with the livelihood of these small men that fish off the coast of Ireland?—We should try and avoid that, certainly.

1095. May I take it that the fishing industry in Ireland has complete confidence in the Board?—I think the fishing industry has.

1096. And they would be quite willing to trust it to see that nothing was done to interfere with the Irish fishing industry?—I think so. We have never had any objection raised to us.

1097. But perhaps the power under the Bill might be utilised so as to apply to large English vessels that might come in and affect the Irish trade?—I think if the large English vessels found it impossible to land small fish in English ports owing to rules that the English authority might make, then it might become necessary—but that is a pure hypothesis—to make rules and regulations in Ireland.

The Witness is directed to withdraw.

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Mr E. W. L. HOLT.

MR. ERNEST WILLIAM LYONS HOLT is called in ; and Examined as follows :

Chairman.

1098. You are Scientific Adviser to the Fisheries Branch of the Department of Agriculture and Technical Instruction in Ireland, are you not?—Yes.

1099. So far as the Irish fishery industry is concerned, may I take it that after hearing the evidence of Mr. Green, you concur in what he said upon that point?—Yes.

1100. Then I need not take you over that, but I think you have had considerable technical experience, and have made considerable inquiries into the fisheries in the North Sea during the time when you were stationed at Grimsby under the direction of the Marine Biological Association?—Yes.

1101. That was some time ago, was it not?—From 1892 to 1894.

1102. And since then have you also inquired into the fishing industry off the south coast of England?—Yes, in 1897 and 1898.

1103. Was your experience prior to 1894 that there was a diminution in the number of fish caught in the North Sea?—It appeared to me to be the case, but I had had no means of judging, except by the reports of fishermen and smack-owners. I gathered that there had been a very serious falling off within a period of about 30 years, but there were no statistics available for checking such statements.

1104. With regard to the size of the fish, especially plaice, was the result of your observations in the North Sea to lead you to suppose that there were two species of plaice?—That there was more than one race of plaice. There was a large race, inhabiting the central parts and northern parts of the North Sea, and I understood that smaller races had been observed in other parts.

1105. Where are the smaller plaice mostly to be found? I mean the small race of plaice, not the small size?—There is a very distinct small race inside the Baltic, but occasionally one hears of it occurring, only in small quantities so far as I know, inside the islands along the coasts of Holland and Germany. Then I gather from Mr. Cunningham's reports that a small race has been located on the English coast so far north as Lowestoft; but I have no knowledge of its occurring in the central parts of the North Sea.

1106. What size does the small race of plaice attain?—I think the small race at Lowestoft averages about 15 inches when it begins to spawn, and is similar to the South of England plaice; but Mr. Cunningham, I see, is here, and he can give you exact information on that subject.

1107. What size does the larger race of plaice attain?—I made out that the usual size at which a female spawned for the first time in the North Sea was about 17 inches, and it grew ultimately to about 28 inches.

Chairman—continued.

1108. Now, you know what we have been calling in this Committee the eastern grounds, do you not, round Heligoland?—Yes.

1109. Is the race of plaice to be found there the small race or the large race?—So far as I can make out from all the enquiries which I made during the time that I was stationed at Grimsby, and all the fish I examined, the vast majority, if not all the fish that formed the subject of that fishery, belong to the large race, and go ultimately to populate the central parts of the North Sea, where they are all of the large race.

1110. Then, obviously, the aim of any department or any body desiring to increase the supply of sizeable plaice in the North Sea would be to check their capture on these grounds, where you say are mostly to be found the not fully grown plaice of the larger race?—It appeared to me that an excessive destruction of the young fish on those grounds might probably be one of the causes for the depletion of the general supply of plaice in the North Sea.

1111. But would you direct your attention in the first instance to protecting the smaller sizes of the large race of plaice, rather than to protecting the smaller sizes of the small race of plaice?—Certainly. I think attention should be devoted entirely to the larger race as being the only one of importance, so far as my knowledge goes, in the North Sea.

1112. And from all the statistics that you collected at Grimsby, did you satisfy yourself as to the locality of these two races of plaice?—I have very little information about the occurrence of the small race in the North Sea, but I am satisfied that the bulk of the fish landed from what you term the eastern grounds belong to the larger race.

1113. Is there not a season of the year when they are more plentiful on those eastern grounds than at another?—It is practically only worth fishing them on those grounds from March to October.

1114. And therefore the protection of the grounds during those months would tend to give a material increase in the size of the fish in the North Sea?—I should say that that would be the result.

1115. They begin then to leave these eastern grounds and to come into the deeper waters. Would they be caught in the deeper waters later in the season?—After the season at which they are very plentiful on the eastern grounds, towards the beginning of the autumn they appear on grounds between the eastern grounds and the Dogger, on a place called the Back of the Scruff and various other names. You find, at that season only, large quantities of plaice corresponding in size to the larger of the small fellows which were on the eastern grounds before; and it appears fairly evident that they are fish leaving the eastern grounds for the central grounds. In the

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Mr. E. W. L. Holt.

[Continued.]

Chairman—continued.

the winter you find a certain amount of immature fish on all the grounds where you catch fish at all, but the proportion is quite a small one.

1116. Then the trade as at present conducted lands the fish at comparatively few ports, does it not?—So far as I know.

1117. And as at present advised, it would probably be sufficient to regulate the landing at those ports without troubling about the smaller ones?—Ten years ago it certainly would have been sufficient. I have no recent knowledge on the subject.

1118. But supposing the conditions not to have changed since then, that would be your opinion?—Precisely.

1119. Then, with regard to the size, what size do you think would be the minimum that would make it worth the while of the steam trawlers going to these eastern grounds?—Ten years ago I thought the size should have been 13 inches; but I think it is extremely probable that the conditions of ten years ago are not those of to-day, and that there has been an actual diminution in the average size of the fish on those grounds, making it now worth while for fishermen to bring home fish which they would have shovelled overboard ten years ago. In fact, if there is no such diminution, and this alleged evil has been going on for ten years without producing any result, it appears that its effect must have been overrated; but I do not know what the present conditions are.

1120. Then you think the conditions are likely so to change that a limit which might be quite effectual at one time would not be effectual at another—I do not mean at another season, I mean over a period of years?—I think that if the average size has decreased, that is to say, the larger fish have become less plentiful, a smaller limit now might be just as efficacious as a larger limit 10 years ago.

1121. On the other hand, supposing the smaller limit to become efficacious, might it not be that in the course of time the size of the fish on these grounds would so increase that it would be desirable to raise that limit to the 13 inches which you thought was necessary in 1892?—It might be so, but on the other hand the fact that the fish had become on an average larger would show that you had largely effected your object.

1122. And would it not be desirable to continue to effect that object?—Probably it would be, but I should say that that would be a matter for consideration when the time comes.

1123. My object in asking you, of course, is to know from you whether you think it is desirable to impose a limit by Act of Parliament, or whether it is not more desirable to have power to vary that limit in accordance with varying circumstances?—I should be altogether averse to any limit fixed by Act of Parliament. It is much better for the Fishery Authority to have the power to make such limit as may from time to time seem to them to be useful.

1124. Could you hand in any statistics of the quantities you examined during those years? Have you preserved them?—I do not think I could.

1125. Have you any observations to give us

Chairman—continued.

on the size of other flat fish—turbot, brill, soles?—The sizes at which they spawn are familiar. For instance the brill begins to spawn at about 15 inches, the sole at about 12 inches, and the turbot at about 18 inches; and I was never satisfied that there was any great destruction of either undersized brill or undersized soles on these eastern grounds, though there were a certain amount of undersized turbot destroyed.

1126. Do you think that the imposition of a size limit on plaice, without any imposition of a size limit on other flat fish, would be sufficient to deter vessels from going to these eastern grounds?—It most certainly would, supposing it excluded a large proportion of plaice—supposing the conditions were approximately the same as they were ten years ago. Ten years ago unless the fisherman could sell practically all his plaice the trip would not pay; he might have a box or two of soles and perhaps a hundred small turbot and a few small brill, and, perhaps, some gurnards, but certainly not enough to nearly pay the expenses of coal alone.

1127. Have you any special knowledge of the markets for, and traffic in, undersized fish on the Continent of Europe?—No, I have none. I understand that the fish traffic in the inland parts of Germany has greatly increased within the last few years, but I have no particular knowledge of that.

1128. Do you know at all whether that is owing to increased railway facilities?—To decreased railway rates. I know that.

1129. I should have said rates?—They have a special rate for small and rather cheap fish.

1130. Now turning for a moment to the South-west of England as distinguished from the eastern ports, do you think that there is any necessity there in the interests of the fishing trade as a whole, to place any restrictions upon the landing of undersized fish caught in the Channel and round the South-west coast of England?—I think absolutely none.

1131. You think it would be a sufficient protection for the great majority of undersized fish in the North Sea if restrictions were made to apply solely to vessels which go to catch them on the eastern grounds?—Yes.

Marquess of Huntly.

1132. Supposing that these small undersized fish were prevented from being sold in England, would you see any danger of foreign smacks going to these eastern grounds and catching them and selling them abroad in a foreign market?—They can do that at present, but I believe that formerly, at any rate, they used to sell most of their fish in England.

1133. But it would be absurd if our trawlers were prevented from going to these grounds and then they were denuded of these fish, which they want to stop being killed, by foreign skippers?—I do not know enough about foreign market conditions, but my impression is that there is not a great market for them abroad.

1134. We had some evidence last time about some owners who said that there were some markets arising for making them into *hors d'œuvre*?—I have no knowledge of the subject.

1135. You

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[Continued.]

Lord Tweedmouth.

1135. You said that you would be in favour of confining these regulations solely to vessels that fish on the eastern grounds?—Yes.

1836. How would you propose to do that?—I think it could be done by confining the regulations to steam trawlers or trawlers of a certain tonnage, because no other boat could get there, and these boats could not get small fish in quantities anywhere else.

1137. In fact you would apply it only to vessels of a certain tonnage probably?—Yes, that would probably meet the case. I should say that I have not very greatly considered the matter.

1138. Have you ever considered the difficulty that would arise from the fact that vessels below that tonnage would be able to land fish of exactly the same size as the bigger vessels?—Yes, but so far as I know there is no ground where they could catch small fish in such quantities as to be of material importance.

1139. You agree that in Ireland, off the Irish Coast at any rate, no damage has been done by the destruction of undersized fish either by Irish trawlers or by trawlers fishing from Great Britain?—We have no large nurseries of small flat fish on our grounds, and no very extensive supply of plaice at all; and in those places where there are a few little trawlers working, by no means all the year round, on a small piece of sandy ground and catching a certain number of immature flat fish, these grounds do not abut on any larger trawling ground and are practically of no great importance to the plaice supply of the British Islands.

1140. But a great many English trawlers do fish off the Irish Coast—the Brixham trawlers, for instance?—Yes, not Brixham trawlers to any great extent that I know of, but steam trawlers from Cardiff, Milford Haven, they largely go to the south and south-west in search of hake or anything except flat fish; they catch soles there to some extent.

1141. You get a good many soles in Dublin Bay, do you not?—A fair number, but Dublin Bay is closed to all trawling, and has been for some years. In the south-western grounds, where they go, the grounds are steep and there are no shallow flats haunted by small flat fish. On the eastern coast the bays are mostly closed by by-law. I know the fish supply there and the different sizes of fish all along that coast everywhere very well from constantly trawling myself, and there is no very serious damage done by the small amount of fishing there is on that coast.

1142. What are your grounds for closing these various bays round the Irish coast to trawling?—On account of a number of reasons with which I am not personally concerned; but I suppose the destruction of small fish is also prevented by closing them.

1143. Were there any other grounds except preventing the destruction of small fish?—I am not aware of the grounds. No considerable trawling by-laws have been passed since I have been a member of the Department, that I can remember, except on the eastern coast; and in that case the trawlers used to come into a place where they did catch a certain amount of small fish. That area has been closed to them now, and they do not come there any longer.

Lord Tweedmouth—continued.

1144. How are soles now caught in Dublin Bay; is it by line or by nets?—They are not caught actually in Dublin Bay at all except a few perhaps in the trammels; but just outside the bay itself the sole ground is; the sailing trawlers catch them there; a good many at certain seasons of the year.

1145. Would you tell us about the Regulations made with regard to the mesh of nets, in the way Mr. Green referred to?—I cannot tell you the exact mesh that is at present in operation. I do not remember it, and I was not aware that the question would arise, but there is a regulation saying that the mesh of a wade net shall not be less than, say, $2\frac{1}{2}$ inches between each knot. These wade nets are small pieces of net mounted without gathering on the head and foot rope, so that they do not sag in any way, and are hauled along the shallows by a couple of horses, one out in the sea and the other along the shore. I have watched them at this work and made some sort of record of their catch. The meshes keep perfectly open; they do not, as a matter of fact, catch much small fish now except a few small turbot; and the industry is disappearing altogether. So far as I know there is only one wade net, perhaps two, in existence at all now on the eastern coast.

1146. Is that the only regulation with regard to the mesh of nets that you know of?—I know there are other regulations with regard to the mesh of nets, but no regulations affecting the mesh of trawlers. There are some regulations about the height of trammels, and of course there are regulations affecting trout and salmon nets.

1147. Yes, I am not speaking about those; but do you suppose that the regulation with regard to the mesh of wade nets has partly led to their disuse?—No, I do not think it was ever a serious industry at all. It was practised, I believe, by gentlemen living along the shore, and farmers when they had nothing better to do, and they seem to have got tired of it.

1148. Then the steam trawling in Sheephaven Bay is absolutely prohibited?—I fancy all kinds of trawling are prohibited in Sheephaven Bay.

Lord Tweedmouth.] Do you say that, Mr. Green?

Mr. Green.] No, sailing trawling is not prohibited. I have all those byelaws here.

Lord Tweedmouth.] But you agree, Mr. Green, with what Mr. Holt said with regard to the disuse of the wade nets?

Mr. Green.] Yes

Lord Tweedmouth.] It is not worth while going into; it is such a small thing.

Mr. Green.] No.

Lord Tweedmouth

1149. (*To the Witness.*) But you may generally say, with regard to most of the coast of Ireland, that steam trawling is prohibited at all times within the 3-mile limit?—It amounts very nearly to that.

1150. And then, of course, there are certain areas in which all trawling is prohibited?—That is so.

1151. But

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[Continued.]

Lord Tweedmouth—continued.

1151. But they are comparatively small?—Yes. [Witness here handed in a map showing the areas affected by by-laws relating to trawling.

1152. But the point I wanted to arrive at was this. I understood from Mr. Green that the object of the prohibition of steam trawling in certain places was on account of the herring fishing?—Yes, that is certainly the case in some bays.

1153. Sheepshaven was one?—Yes, and in Killara Bay steam trawling is prohibited during the period when there are shoals of herrings in the bay.

1154. And is it your opinion, or have you formed any opinion, whether that has been successful; I mean has it been so successful that more herrings have come since the steam trawling has been prohibited?—It is very hard to form any opinion on the herring, because it comes in such an uncertain manner; but I think, reading over the old reports, that there was very good evidence that if herring were in there and a steam trawler came in the herring went out, or, at any rate, could not be caught with equal facility. The possibility of a steam trawler entering narrow waters would also deter men from shooting herring nets there. The herring fishing in Sheepshaven has been good of late years.

1155. But generally would you say that the fisheries of Ireland are as good as ever they were?—No, I should not like to make that statement.

1156. Will you tell us what fisheries have fallen back?—The fishing by sailing trawlers seems to have deteriorated a great deal. The deterioration has been attributed, rightly or wrongly, to the action of steam trawlers, with which the authorities were not able to take any efficient action until a Bill was passed two years ago, and until they became provided with a cruiser for fishery protection purposes. Since then the steam trawlers have kept pretty well away from the places where they are prohibited.

1157. But do you think that the limitations which have been put on steam trawlers have had the effect of improving the fishings of other vessels when that limitation has taken place?—Their effective limitation is a matter of such recent date that one could hardly anticipate any material improvement.

1158. In what classes of fish do you think there has been deterioration in the Irish fisheries?—Haddock have certainly been a diminishing item, but they appear to be increasing again; and I should not be disposed to say that their deterioration was due to steam trawling, because it has occurred in other places.

1159. But the Dublin haddock is rather an old story?—It is chiefly an old story now.

1160. But in flat fish do you think there has been any diminution?—One hears it constantly alleged, but in the absence of absolute evidence and of any exact statistical information in former years it is very difficult to judge. I think on the whole there has been a deterioration in flat fish in some of the bays of the coasts—notably, I think, along the Waterford coast.

1161. That would be the ground, rather, that some of the Brixham men would come to?—The Brixham men know the ground, certainly; (0.10.)

Lord Tweedmouth—continued.

I have fished there with a Brixham mate, but I do not think they come there much now.

1162. But supposing this Bill were to be passed by Parliament, would the Irish authorities take advantage of it for Irish purposes?—I think I must really refer you to Mr. Green on a matter of that sort.

Lord Heneage.

1163. Generally speaking, you think, it would be a great advantage to give every possible power under the Bill to the Board rather than to have hard-and-fast rules fixed by Act, as I understand by your evidence?—Yes.

1164. And you think that it would be a great advantage to the trade generally rather than to have an Act like the Bill of 1900, in which the limit was laid down by legislation?—Yes, I am certain that it would be much preferable to have a limit which may be altered from time to time as circumstances dictate.

1165. And you believe that is the view of the Irish Board which you represent?—So far as I am aware of it.

Lord Northbourne.

1166. I should like to ask you, as a scientific witness, what are the number of eggs in the spawn of a sole?—I cannot tell you from memory; I think it is about five or six million so far as I remember. It is a large number.

1167. From a pair of these fish, how many other fish may one presume, from a single spawning, will come into existence?—It is a calculation I have never made.

1168. Has it been made?—Yes, it has been frequently made, always with different results, so far as I am aware.

1169. Because I understood a professor here last week to say that from a pair of soles you would not get more than two others. I could not understand it; I could not follow it. I thought they reproduced in many thousands?—The probability, I should say, why they have arrived at reproducing in such enormous numbers is that otherwise they could not exist; that the mortality is so great from one cause or another that an enormous number of ova is essential to the upkeep of the species.

1170. What are the causes of mortality amongst the ova?—To some extent the failure of fertilisation is a cause, I think, though not, so far as I know, a large one in the open sea. Then the eggs are tiny things, naturally helpless, and they are greedily eaten by many of the small predaceous creatures that are to be found in quantities in the sea. The young ones when they are hatched are blind, and hardly capable of swimming; absolutely helpless, and again they are likely to be eaten; for successful growth it seems that they must reach the sandy shallows at a certain stage, and their arrival there must depend largely on wind and tide; and practically until a sole is about 6 or 8 inches long he is eaten by anything that can catch him.

1171. It is well known that certain classes of fish will eat each other; does that apply to the sole?—The very youngest sole I know anything about eats tiny sprats when he can get them. He is certainly a carnivorous beast; but I do not think

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think any sole at any stage of his existence can eat another. They are bottom-feeding creatures, except in the very earliest, minute stages; when they have attained adult form they live on worms and shell fish and the like.

1172. Then, notwithstanding all these disadvantageous circumstances that tend to destroy the balance of nature in these animals, you think a measure of this kind is necessary for the preservation of a sufficient quantity of edible food?—Yes, my impression is that the fish has in nature, without the interference of trawlers, quite enough to do to keep his species up; and the balance would appear to have been upset by human agency, and may conceivably be redressed by the same.

1173. Could you conceive it possible that the fishing industry would be on such a large scale that they would be absolutely destroyed? I suppose the oyster may be said to have been at one time in risk of destruction by excessive take?—They have been absolutely and entirely destroyed in many beds in Ireland where formerly they were most abundant.

1174. And can you conceive that the same thing might be possible with flat fish unless some measure of this kind is passed?—I think there is a certain amount of evidence that flat fish have been destroyed as a commercial fishery on certain grounds.

Chairman.

1175. May I take it that in effect the byelaws within the territorial waters round Ireland are very analogous to those in effect around the territorial waters of England?—Yes.

1176. Have you any knowledge of the tonnage of the smallest vessels which go to fish in these eastern grounds?—Forty or fifty tons, according to my recollection. I do not know the Lowestoft tonnage. I think it is about 40 tons. Mr. Cunningham knows it well.

1177. It has been suggested to the Committee that the statistics in connection with the size of fish are not so complete as they might be, and that if masters of sailing vessels were compelled to make returns of the fish they bring in, their size, and where they caught them, and were paid for so doing, we should gain a great deal of light upon the subject, which at present is somewhat obscure. Could that be done in Ireland?—Most of the steam trawlers at work from Dublin already do it for us; the sizes are roughly classified, but they give us the grounds and the approximate numbers of the catch taken on each of the grounds. The expense is extremely small.

1178. You find it of material value?—Yes.

The Witness is directed to withdraw.

Mr. JOSEPH THOMAS CUNNINGHAM, F.Z.S., is called in; and Examined as follows:—

Chairman.

1179. You are Master of Arts and a Fellow of the Zoological Society, I think?—Yes.

1180. And you have given considerable study to this question of the sizes of fish, and written several works and pamphlets and papers upon the subject?—Yes.

1181. The Bill of 1900 had, you may recollect, a fixed limit, which for plaice was 8 inches. In your opinion would that be sufficient to make it not worth while for trawlers to go to the eastern grounds?—No, according to my experience at Grimsby and on the eastern grounds themselves it would make no difference to the practice of the fishermen; it would make scarcely any difference to the value of the catches which they land.

1182. What size would make a difference?—I think the least size which would make a difference to the practice of the fishermen would be 10 inches for plaice.

1183. Did you hear the evidence given by Mr. Holt?—Yes.

1184. Do you agree that there are two races of plaice?—Yes, I think I may claim credit for that as my discovery in the North Sea—that there are two local races of plaice or local forms within the limits of what is generally called the North Sea. According to my observations, the characters with regard to the size at maturity and the maximum size that the plaice attains in the southern part of the North Sea south of the

Chairman—continued.

line between Norfolk and the Texel, are the same as in the plaice of the English Channel; that is to say the English Channel plaice really extend up to the Texel, and the larger North Sea plaice extend southwards to that line.

1185. Therefore, in your opinion, it would be desirable, in the interest of an increase of the number of sizeable fish, to commence at any rate by endeavouring to preserve these undersized plaice of the larger race?—Certainly, I think it is most desirable.

1186. The locality of which is easily distinguished?—The locality is certain. I mean it is certain that these small plaice of the larger race are found on what the fishermen know as the eastern grounds. Whether they are found beyond that or not is another question, of course, but they certainly are found there, taking the eastern grounds as extending all along the German and Danish coasts in the Heligoland bight, as far west as seven degrees.

Lord Tweedmouth.

1187. Can you distinguish between an 8-inch plaice of the smaller race and an 8-inch plaice of the larger race?—I do not think it would be possible. The characters by which they are distinguished are really based upon the examination of a large number of specimens generally

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[Continued.]

Lord Tweedmouth—continued.

generally adults. But the way in which it is most easy to distinguish them is by ascertaining the maturity of the different samples. If you take a sample from the eastern grounds or from the north part of the North Sea, say between 10 and 20 inches in length, the 12, 13, and 14-inch plaice would all be immature, or nearly all; whereas from the grounds off Lowestoft and Plymouth they would nearly all be mature.

1188. Then how do you know that the small plaice on the eastern grounds belong to the larger race?—Because we never find them mature under 13 inches; we never find them in a spawning condition under 13 inches.

Chairman.

1189. Taking the fish which come into Lowestoft, do you believe them to be mainly of the smaller race of plaice?—Yes, mainly.

1190. Whereas those that come into Grimsby, Hull, and London are mainly the larger race of plaice?—Yes.

1191. Therefore you believe it to be more desirable to protect the undersized fish which are now brought into the ports of Hull, Grimsby and London than the undersized fish that are brought into Lowestoft and Ramsgate?—Yes, and also because the quantities are so immensely greater.

1192. And you would, no doubt, agree also with the last witness, that it is only during certain months of the year that the great majority of these fish are brought in?—Yes; that is the experience of the trade and my own observation.

1193. And you believe that it would not be worth while, from your examination of the boxes and the value of them, to go to those grounds if plaice under 11 inches were not allowed to be landed?—I think it would make a great many voyages unprofitable. But, of course, the fish that are caught in different voyages vary with the distance from the shore and the depth of the water, and also from circumstances that are unknown. A man may find good, valuable fish on a certain ground one week, and the next week may find it almost bare; but on the average I have no doubt a size limit even of 10 inches would make a large number of these voyages unprofitable.

1194. Would not the trawler at once give up fishing if he found the large fish had left the area where he had been fishing a day or two before?—Undoubtedly. According to my experience on board trawlers they are always searching for grounds where they can get good hauls; and if the hauls cease to be good they invariably go elsewhere. They sometimes steam a thousand miles on one voyage.

1195. You have yourself made some trips on trawlers on these eastern grounds, have you not?—Yes.

1196. Then you can tell us what the practice is—what fish are kept, and what fish are thrown overboard?—It varies a great deal. I went out twice on trawlers to try and get amongst the plaice on the eastern grounds. The first time we did not go near enough to the shore to get (0.10.)

Chairman—continued.

what are known as small fish at all; we got good-sized fish. On the second voyage I was rather surprised to find that the skipper himself threw overboard all the plaice under 10 inches.

1197. Do you think that many of those lived?—Yes, I should think at least 25 per cent. of them would live.

1198. Therefore, even if these small plaice are caught and are not allowed to be landed, at any rate a certain proportion of them would survive which are now destroyed?—Undoubtedly.

1199. What is the smallest size you have seen landed in Billingsgate?—In Billingsgate I think I measured one 6 inches; I believe they are sometimes 5½ inches. That is about the smallest.

1200. When you were trawling on these waters did you notice what foreign vessels there were there?—The only foreign vessels I saw were small sailing vessels which the fishermen call snibs. They are half-decked vessels, not like the English sailing trawler. They are much smaller: vessels of about 15 to 20 tons.

1201. And as compared with English trawlers there, are the foreign trawlers insignificant in numbers?—I do not know the numbers. I do not think they are very numerous.

1202. You have no doubt in your own mind, have you, that it is within the competence of Parliament to give orders to vessels of British nationality to go or not to go, or to do anything they may enact?—That is, I understand, the law on the matter—that Government have the power to prohibit all English vessels.

1203. I think you yourself have taken legal advice upon the matter?—Yes.

1204. With regard to the size limit, you say that an 8-inch limit would not protect the eastern grounds?—I feel quite convinced of that.

1205. What effect would the large limit of 13 or 12½ inches have upon the Lowestoft and Plymouth smack-owners?—So far as my experience goes, both at Lowestoft (I do not know Ramsgate very well, but the conditions are much the same) and Plymouth, I think it would practically do away with the trawling industry to have a limit of 13 inches.

1206. Therefore a common limit applied to all vessels would have one of two effects—either it would seriously damage the industry in one part of England, or prove ineffective in protecting the small fish?—Yes. With regard to those extremes that you have mentioned. You have mentioned two extreme sizes, 8 and 13 inches. I think the happy medium might be found.

1207. What is your happy medium?—The conclusion I have come to at present is that if it was necessary to make a limit applying to all the coasts of Britain, it would be possible to impose a limit of 10 inches for plaice and soles, and 12 inches for turbot and brill.

1208. And you think that would benefit the fishing industry in all parts of England?—I think it would be a great benefit to the supply of

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[Continued.]

Chairman—continued.

of fish, and I do not think it would injure the fishermen.

1209. Do you think it would be a greater advantage to have a fixed limit for all parts of Great Britain, or to have a discretionary power of a Government department to vary the limit in accordance with the experience gained?—I would prefer the latter method very much. I think it is scarcely reasonable to go to the House of Commons and ask them to consider a half-inch on a limit for plaice every now and then; and in fact, if a limit was fixed by Parliament, it could not be altered very well for a long time.

1210. Do you agree with what Mr. Holt said, that time may change the conditions on these eastern grounds, and that what would be a proper limit at one period, some years afterwards might be found to be insufficient, and *vice versa*?—I think the conditions might change to a great extent, but I am not quite sure how far the average size could be reduced for the summer season. I think it might be to a certain extent. What I mean is, that on the whole the conditions tend to repeat themselves every summer; that the fish found in the summer months are fish of a certain age, that is to say, one year and two-year-old fish. If the two-year-old fish were diminished by excessive fishing the average size would be less, because then there would be a larger proportion of one-year-old fish.

1211. There, again, elasticity would be desirable?—Yes.

1212. May I take you now to the question of other flat fish besides plaice? Take soles. Has there been a decline in the number of soles landed on the east coast?—That is a matter on which I have not very good evidence to give personally, because I have to rely upon the statistics which are obtained and published by other people; but there has been a decline according to the Board of Trade statistics, in the quantity of soles landed on the east coast during the last 10 or 12 years, I believe.

1213. While at the same time there has been an increase, has there not, on the south and west coasts?—Yes, a considerable increase.

1214. And with regard to plaice, is the reverse proposition true—that there has been a decrease on the west coast and an increase on the east coast?—I do not remember whether there has been an increase of plaice on the east coast; but I should like to remark, before passing from that point, that the increase of soles on the south and west coast is, according to my belief, entirely due to the increased number of boats fishing there, not to an increase in the number of fish.

1215. Perhaps that may be applicable to almost any fish, that it is due to increase in the number of vessels, the increase in their catching capacity, and the greater distances that they go?—Taking the total quantity of fish landed, that I believe is so.

1216. Therefore the mere fact that more fish have been landed in recent years is no proof that the supply of fish in the North Sea has been increasing?—Certainly not.

Chairman—continued.

1217. Have you any observations to make with regard to the size of the mesh; do you believe that any regulations affecting the size of the mesh would protect the undersized fish?—I have no doubt that the undersized fish could be protected by an increased size of mesh; but the matter is one of great practical difficulty, because if the mesh at present used in the trawl is increased to any considerable degree, a certain number of other valuable fish will be lost, principally haddock and cod—round fish.

1218. With regard to the question of vitality, is a sole a fish of considerable vitality? If he were thrown overboard, would he be likely to live?—According to my experience, the sole is the most tenacious of life of nearly all the fishes I have had to do with. I think it is the most tenacious of life.

1219. Then with regard to turbot, what is your experience of the size of turbot on the eastern grounds?—There were a good many small turbot obtained and landed also on the voyage when I was present on the eastern grounds.

1220. What size limit would you consider sufficient to protect undersized turbot?—It is rather difficult to say. I calculated that nearly 25 per cent. of those obtained on my voyage were under 12 inches; but I think an even higher limit might be imposed with regard to turbot, because it is such a large fish.

1221. What have you to say with regard to brill?—Brill is very similar to turbot in most respects, but it is on the average slightly smaller when it reaches maturity.

1222. At what age do the fish become mature; that is to say, capable of reproducing their species?—There is a good deal of difference of opinion as to that. My own opinion is that, generally speaking, they become mature at three years of age. Dr. Fulton, I believe, has argued that it takes much longer—even five years; but I think there is some miscalculation about his results.

1223. What age would you regard these plaice of 6 to 10 inches?—Not more than two years old; some of them one year.

1224. If they were spared for another year, in your opinion they would then become reproductive?—Yes, I think so, some of them; they would be from 13 to 15 inches long, I should think, or 12 to 14 inches.

1225. As regards the regulations which might be brought into operation in territorial waters, do you think there might be a material difference in the size of the small fish that might be caught within territorial waters and those that might be caught in the eastern grounds?—No, I do not think I should be inclined to make a distinction in that way. I should keep entirely to the distinction between the larger race and the smaller race. I think if there were a limit in the Channel of 10 inches for plaice, it should apply also to territorial waters.

1226. The object would be to prevent vessels from going in those months to those places where

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[Continued.]

Chairman—continued.

where the great majority of these small fish are, and to leave the others alone?—Yes.

1227. Can you tell me anything of the size and tonnage of the vessels at Lowestoft?—They are mostly about 50 tons—from 40 to 60 tons.

1228. Do they go to the eastern grounds?—I think they never go to what we call the eastern grounds. They may go near to the Dutch coast, opposite Lowestoft, up and down, and get small plaice there, but that is not what is known technically as the eastern grounds at Grimsby.

1229. Are the vessels that do go to the eastern grounds larger than the vessels you have just mentioned?—According to my experience the vessels that go to the eastern grounds are the steam trawlers of Grimsby and Hull. I do not know what the conditions are now. Some years ago there was a large fleet of sailing smacks, owned principally in Yarmouth, I believe, that in the summer used to be stationed on the eastern grounds, and the fish was collected by steam carriers and taken up to Billingsgate.

1230. Then, presumably, the object of preserving these fish would be attained if by the Orders of the Board of Agriculture and Fisheries, the prohibition of the landing of small fish was confined to these steam trawlers and the carriers which bring them to market?—Yes, if that could be practically arranged.

1231. In that case, the vessels sailing from Lowestoft would not be affected?—No.

1232. On the other hand, if subsequently the vessels sailing from Lowestoft did find it sufficiently profitable to go to those grounds, the elasticity of the measure now under the consideration of the Committee would be sufficient to enable the Board of Agriculture and Fisheries to prohibit them also?—Yes, I do not think there is much probability of sailing smacks from Lowestoft going to the Heligoland grounds. I think the distance is too great for them, especially in the summer time, when the winds are light.

1233. From your own practical experience of the matter, do you think there would be any difficulty in making this measure apply to the vessels that fish on these eastern grounds without in any way interfering with the fishing trade in other parts of the country?—No, I do not think there would be any great difficulty if it was applied to steam trawlers and steam carriers; that is perfectly definite. I think the only difficulty might be that if the prohibition was confined to certain ports they might try to land at other ports on the coast.

1234. Then would it be possible to apply it to those other ports also?—Yes.

Lord Northbourne.

1235. You have given attention, I suppose, to the penalties which are proposed and put forward under this Bill. "Any person liable on conviction under the Summary Jurisdiction Act shall be fined not exceeding one pound for every package containing fish landed in contravention of the Order; or, where fish are not contained in packages, to a fine not exceeding twenty pounds." Do you think that meets the case? (0.10.)

Lord Northbourne—continued.

Do you think that will be effective?—Yes, I think so; I think it will be enough.

1236. Have you had much contact with the fishing population yourself?—I have been amongst them for many years—nearly 20 years.

1237. Have you heard that subject discussed at all—about the penalties?—No, I have not heard it discussed a great deal. I have had some experience of the risks they run and the penalties they suffer for transgressing the regulations of other nations. If they fish within the Danish or German territorial limits, the boat is arrested, the captain is taken to prison, the fish and gear are confiscated, and very often a heavy fine is paid as well.

1238. Does that often occur now?—Yes, I was at Grimsby in 1895 and 1896, and it occurred several times.

1239. What was the offence committed?—Fishing within the territorial waters of those countries; but the attraction was the immature fish; they had to go within the territorial waters in order to fill up with these small plaice.

1240. How do you think the fishing population will receive this legislation?—I do not know what view the fishermen might take, because I have not paid a great deal of attention to the opinion of the fishermen themselves, those that catch the fish. I have paid more attention to the opinions, of the owners of the boats.

1241. Do you think if this capture of undersized fish were to go on on any large scale it would tend to the destruction of this industry altogether eventually?—I do not know how long it would take to destroy the industry altogether. I would not like to say that the actual trawling industry or the existence of plaice in the North Sea would ever be entirely destroyed, but I have a rather strong feeling that if some practical method was found, and the measure could be enforced, we should succeed in increasing the number of larger fish on the fishing grounds, and that is the great object which seems to me to be desirable. The number of larger fish has been so reduced that we can get nothing but small ones now.

1242. Then with regard to the destruction of these fish by their own species or by other animals, does that go on on a very large scale?—We do not know a great deal about that, but there is not, as far as I know, a very great destruction of plaice, or other flat fishes when they reach the condition of what we call immature fish. With regard to plaice from two up to, say, 10 inches, there is no very great natural destruction of them, so far as I know, but there is undoubtedly very great destruction before they reach the condition of perfect plaice, at 2 inches in length.

1243. Have you ever given any attention to the question of the reproductive power of these fish?—Yes, I have calculated the number of eggs in various fishes.

1244. How many eggs do you think there would be found in a mature sole?—I do not know exactly, but I think Mr. Holt's memory was at fault when he said so many million. I remember pretty well that the number of eggs is in

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Lord Northbourne—continued.

in the plaice is about 300,000, and the number in the sole is a little greater.

1245. I think a witness last week said it was less in the flat fish than in the others?—The number varies very greatly. The turbot is one of those that have small eggs, which are exceedingly numerous. The turbot has about 8,000,000 eggs. The plaice's eggs are very large, comparatively. (The actual number varies from 400,000 to 750,000 according to the size of the sole.)

1246. Then if you had such an immense number of eggs, how many pairs would be reproduced from a single pair in a single spawning season? How many of these eggs would come into existence?—Do you mean what would be the size of the family?

1247. Yes, if you like to put it like that?—Out of the 300,000 eggs you cannot tell how many would survive; there would be a large percentage of loss in the egg condition, and what we call the larval condition; but there must be several thousands of young, perfect plaice, two or three inches long, produced by one, I should think, to make up for the enormous destruction that goes on of the old ones.

1248. I could not understand the witness last week—I do not know if you saw the question which was put to one of the scientific witnesses last week, who said that not more than two at the very outside would come into existence, would reach maturity. I could not follow that at all. I should think the case you are putting before us now is much more intelligible—that several thousand, you think, would come from a single sole?—That is rather a stock argument, I think, amongst biologists with regard to a single pair. It means that if a species in nature is in a condition of stationary population, not increasing and not decreasing, it is obvious that it is only necessary, supposing each individual to reach maturity, for each pair to produce another pair in order to keep the population stationary; that if they produced more the population would increase.

1249. My only object in asking these questions at this time is that it is the belief of many people, and I suppose you would admit, that there is not a great deal known of what goes on under the sea, that at all events there is still a great deal to be ascertained and known?—Yes, but I think we know a great deal more than we did 20 years ago.

1250. And that the reproduction of these animals is on such a scale that no matter what may destroy them, the balance of nature is pretty certain always to be preserved. But you would not quite accept that. You think that if by means of men, fishing is carried on to such an extent that the destruction of these fish goes on, the time will come when, if not absolutely destroyed, the industry will be very much depleted?—Yes. I think the supply of fish on the old grounds is getting less year by year.

Lord Heneage.

1251. From a scientific point of view you made rather a point of the fact that in your opinion there are two distinct kinds of plaice, one originally bred in the North Sea and the other coming from the Channel. Is there any

Lord Heneage—continued.

difference in their conformation and their size, or is it only from the fact of the different periods at which they come to maturity that you judge of them?—So far as my observations go, the maximum size corresponds to the size of maturity, that is to say, the North Sea plaice reach a much larger maximum of size than the Channel plaice.

1252. Then it is only because the fish come to maturity at a certain size that makes you of opinion that there are two distinct species of plaice, or are there any other reasons?—There are other differences, but they are not constant for each single individual. You cannot take one individual and say, "That is a Channel plaice," and another and say, "That is a North Sea plaice"; but if you examine carefully a thousand individuals, measure their different characters and tabulate them statistically, you find that the averages are different in the two samples.

1253. Then it would not be possible for ordinary fishermen or Custom House officers or anybody else to know the difference?—No, it would not be easy. Very often a fisherman, from the general appearance of the fish, can say with wonderful accuracy where they have been caught, but they would not look at these characters I am speaking of, but at the general appearance.

1254. Might not the difference of time of these plaice coming to maturity be caused by difference of locality or difference of temperature of the water?—It probably is.

1255. Then they might be really, after all, the same species of plaice, but in different temperatures and localities?—That we do not know; we do not know whether the differences are produced in the individual by the place it grows up in, or whether they are hereditary and due to the fact that it comes from different parents.

1256. Do I rightly understand you that there might be one limit of size of prohibition for the British and Irish coasts, and a larger size limit for the North Sea?—I should not like to say positively about that, because I am not an administrator. But what I said was rather negative: that if the size was made as large as 12 inches for plaice it would, in my opinion, be impossible to apply it to the fisheries of Lowestoft, Ramsgate, and the South Coast. Such a limit as 12 inches could only be applied to the eastern grounds, and the northern part of the North Sea.

1257. But has there not been for some time a general consensus of opinion that 10 inches would be a fair limit?—Yes.

1258. Do you believe that you can differentiate between trawlers of larger and smaller tonnage?—No, not very easily; I think you could differentiate between steam trawlers and sailing trawlers.

1259.—We have had the question of an International Convention brought up during the sitting of the Committee very often; are you not of opinion that such a Bill as we are now looking into would tend to an International Convention in the future?—I think it would be better to go into a Conference to discuss International proposals with a statement that we had already passed

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Lord Heneage—continued.

passed a law on our own account; I think that would give us a stronger position.

Lord Tweedmouth.

1260. You were, I think, for about 10 years at the Laboratory at Plymouth?—Yes, about 10 years.

1261. About 1897 you left it?—I left it in 1897.

1262. Since then what have you been doing?—At the end of 1896 I left.

1263. Have you been keeping up your interest?—Yes. I have not been on the North Sea very much, but I have been connected with the fisheries, holding a post in Cornwall under the Technical Instruction Committee for Sea Fisheries.

1264. Have you been carrying on any experiments down there lately?—Yes, I have carried out a great number of experiments.

1265. But you have not done anything in the way of taking statistics of fisheries off the coast of Cornwall?—Not of trawl-fisheries.

1266. What do you say would be the maximum size of this large kind of plaice that you have been referring to when they get full grown; to what size do they grow?—The largest specimen measured 28 inches, I think.

1267. You would say from 25 to 27 inches would probably be a very fine specimen?—Yes.

1268. What would you put as the maximum average size of a big small-sized plaice?—The extreme maximum at Plymouth is 25 inches, I think, but that is very rare; and at Lowestoft the largest that are generally landed are from 18 to 19 inches.

1269. Then would you say that the average big fish in the one case might be put at 25 inches, and the average big fish at 18 inches in the other?—It would be rather difficult for me to say that; I would rather give with more certainty the sizes of the smallest mature female fish. The smallest mature female fish, at Lowestoft for instance, is 9 inches long; and from the Dogger Bank and from the grounds of the North Sea, seen at Grimsby, 13 inches long—a difference of 4 inches.

1270. But though a fish arrives at maturity at a certain size, it is still a young fish; it has not completed its growth?—Yes, it grows afterwards.

1271. It grows considerably afterwards, of course?—Yes.

1272. Merely taking the size at which it first spawns does not necessarily involve that it does not grow pretty big afterwards?—No. I think the best idea of sizes is given by the analysis of sample boxes that I have taken at Lowestoft and Grimsby, in which I have tabulated the sizes at each inch—so many fish at such and such a size.

Chairman.

1273. Will you hand those tables in for the use of the Committee?—Yes. (*Handing in the same.*) [*Vide Appendix.*]

Lord Tweedmouth.

1274. Then, of course, there are all these questions of food and temperature and what

Lord Tweedmouth—continued.

not to be considered; under those different conditions the fish would grow very differently?—So far as we know the conditions in the different regions are not varying from year to year; they have probably been the same for the last 100 years.

1275. But I mean that therefore the variations of a particular ground would account for the difference in the size of the fish without necessarily involving a difference in the species?—It is not a question of species at all; it does not matter really for fishery questions what we call them. We only look at the matter empirically by the differences that there are; it is not necessary to know what the causes of them are.

1276. But you think that a uniform limit of 10 inches would be fair to apply to both sorts of plaice?—Yes, I think it would be possible.

1277. You do not think that the catches that are made up mostly of what you call the small race of plaice, would be unfairly restricted by a 10-inch limit?—They would lose a certain percentage, but not a large percentage of their fish. In one box I measured it is only four fish out of nearly 200. The 10-inch limit would not do too much harm to the Lowestoft sailing smacks on the ground where they were fishing—at least when I was with them; but it would impose a healthful restriction on the in-shore shrimp man who takes soles of 7 or 8 inches long.

1278. Do not you think he would make a loud complaint if he was stopped?—He generally does speak more loudly than anybody else, but I think he ought to be restricted.

1279. From your experience of trawling, would you say that about 25 per cent. of these undersized fish represent the total amount that would live when returned to the sea?—Yes, on the average. Sometimes they might all be dead, and sometimes more than half might be alive. It depends upon the length of time they have been on deck, and the treatment they have received since they left the trawl.

1280. And also the ground?—Yes. Occasionally when taken out of the net the flat fishes would be alive and kicking. I have sometimes seen them after an hour on deck all flaccid and dead, and thrown overboard dead.

1281. From your experience are you inclined to say that the English fisheries are going back?—I think there is no doubt that the grounds which have been fished a long time are much less productive now than they used to be. On the other hand, we have every year, almost, an extension of the area over which the fishing is conducted, not only north and south, but also into deeper water. Within the last 10 years the fishing has been extended from a limit, say, of 40 or 50 fathoms to more than 100 fathoms in depth alone, and that gives many square miles of area.

1282. Then should you attribute such diminution as you have observed to the operation of man?—Yes: I think undoubtedly on such grounds as those in the North Sea the diminution in the supply, especially of flat fish, is to be traced entirely to the excessive trawling; and I think if the trawling were to stop, the population
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[Continued.]

Lord Tweedmouth—continued.

of soles and plaice and so on would be restored in about three years.

1283. And you think the proposals in this Bill would at any rate increase the proportion of large fish in the sea?—I am very strongly of that opinion.

Marquess of Huntly.

1284. In Professor D'Arcy Thompson's evidence he gives an account of some experiments as to the death rate amongst plaice. I see he says, "of which more than 4,000 were taken, and only 0·12 per cent., or 12 fish in 1,000, died." That is a very much smaller rate than 25 per cent.—I do not understand the conditions of the experiment.

1285. I think it was an experiment conducted by the Scottish Fishery Board?—Were the plaice picked up upon the deck of the trawler and put into a tank of water?

1286. I will read you what he said: "We tried yesterday morning, in order to get a fresh and recent experience outside the Firth of Forth, and found there that after a haul of two hours the cod and haddock were lively on being measured at least one hour after hauling, and the whole of the flat fish were also alive and well at the end of the hour. I may say that these plaice, which were caught at 10 o'clock yesterday morning, were also alive and well at 10 o'clock last night. (Q.) After being 12 hours out of the water?—(A.) After being 12 hours out of the water."—Twelve hours on deck, not being put into the water at all?

1287. He says—out of the water, it must be so. If that is so, if the skippers of these smacks could be persuaded or induced to return these small plaice to the sea, there would be much less loss than 25 per cent.—Yes; but the work of the fishermen is so rough, especially in rough weather, that I put my estimate of the number that would survive extremely low. In stormy weather you sometimes see a whole heap of fish mixed up with all kinds of rubbish, sea urchins, and things emptied out from what they call the cod-end, into the pound, where it lies two or three feet thick, and then two or three men go and trample upon it with their sea boots to see to the gear, and that is rather likely to be fatal to the fish.

1288. If Parliament should ever see fit to prevent British trawlers from going to the eastern grounds you seem to think there would be no difficulty about it. But it would have to be carried out by means of policing those waters, would it not?—Yes, I presume it would be necessary to have police vessels—gunboats or vessels of the navy.

1289. That would be very expensive work, would it not?—Yes.

1290. And supposing we prevented our own trawlers going to the eastern grounds, and then foreign trawlers were built to go to them and to find a market for the fish abroad, the whole good that we propose would be lost?—There is always that difficulty without an International arrangement. Supposing these size limits were imposed for the eastern grounds, the Grimsby owners might decide to fish on those grounds and

Marquess of Huntly—continued.

land all their catches at Geestmünde on the German coast; there would be nothing to prevent them.

1291. You are not aware that there is any market abroad for these small fish now?—I am not aware of the extent of the market, or whether it is a good market—whether the price is very good.

Duke of Abercorn.

1292. Has the sole the same vitality as the plaice?—According to my experience it has more vitality than the plaice.

1293. Therefore he is likely to live longer than the plaice under the same conditions?—Yes.

1294. When you mentioned that the trawlers are trawling now in 100 fathoms of water, do you catch any small plaice?—No, none at all.

1295. They are all the big class of plaice?—Practically you catch no plaice at all; they do not go so deep as that.

1296. What is the average depth for plaice?—Very few are found beyond 50 fathoms.

1297. And the smaller ones live in the shallow water?—Yes; the vast majority of them under 15 fathoms; the very small ones under 10 fathoms.

1298. And when they become bigger in size they go to deeper water?—Yes.

Chairman.

1299. You were asked by a noble Lord just now whether in your opinion it would be desirable that the size limits should vary in accordance with the different ports at which the fish were landed. Would there be any difficulty in doing that, if it were found desirable, by the Bill now before the House?—No, I do not think there would be any difficulty.

1300. And would there be any difficulty in regulating the size of the vessels so as to prevent any interference with the small in-shore fishermen whom you were describing just now?—It would be possible, if it were thought advisable in such a case as Lowestoft, I mean, or in the Wash, to impose a limit, to apply it to deep sea trawlers and not the in-shore fishermen.

1301. And supposing the fear was realised that Lord Huntly seemed to entertain, that it might be possible that foreign vessels would continue to trawl and take away these undersized fish from the eastern banks, would it not be possible at any moment for the Board of Agriculture and Fisheries to alter its Order, and again to allow the Grimsby and Hull people to go and fish on those banks?—Yes, I think so certainly; and my own idea was, that if our people complained that the Germans and Danes were catching all the small plaice which they were not allowed to catch, then the Government, through the proper channels, could address to the foreign Government a protest, and that might lead the way to an International arrangement.

1302. At any rate, by the Bill we should keep complete power in our own hands for protecting in the manner we thought best, the fishing industry?

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[Continued]

Chairman—continued.

industry?—Yes, and to take off the limit afterwards if it was thought necessary.

Lord Heneage.

1303. May I ask a question that I know you have considered, that is, with regard to the months in which it would be most desirable to prohibit the destruction of these fish, provided they were not prohibited all the year round. How many months should you say they ought to be prohibited?—My conclusions on that subject are really rather based on Mr. Holt's statistics at Grimsby than my own; but no doubt they are perfectly trustworthy in every way. The result is to show that the evil exists in any serious degree only in the summer months from March onwards; in fact six months from March to August would be sufficient to stop the fishing on the eastern grounds.

1304. Would you advocate that these six months should be the six months of the limit; or do you think it ought to be the whole year round?—I think the limit should be confined to those six months, at all events to begin with; I do not think it should be all the year round.

1305. With regard to what you said just now about the sale of small fish in German ports, are you aware that Mr. Archer in his evidence said that he had made enquiry with regard to that, and that only 6·4 per cent. of the whole of the small fish caught was landed in Germany?—I was not aware of that.

Lord Heneage—continued.

1306. And that there was really no market for them in Germany, except at Altona and Hamburg. And there only a small market?—No, I have not made those enquiries.

Lord Northbourne.

1307. The plaice, like the sole, is an animal that breeds only on ooze, or mud, or sand; you do not find them among rocks?—It lives on mud and sand; it does not live among rocks. Did you say breeding?

1308. Yes?—The breeding has nothing to do with the ground properly speaking; the fish only sheds its eggs, and the eggs float towards the surface.

Duke of Abercorn.

1309. Are you aware that the law of Denmark is that all undersized fish have to be thrown overboard by the trawler?—Yes, and other fishermen too. I believe; not only the trawlers. There are a lot of in-shore fishermen in Denmark, and the limit has been in existence some time.

1310. I suppose by that means a large number of these undersized fish would have their lives saved?—Yes, it applies to all kinds of fishing, especially seining, where all the fish thrown overboard into the water survive.

The Witness is directed to withdraw.

Mr. CHARLES HELLYER is called in; and Examined as follows:—

Chairman.

1311. You are. I think a Justice of the Peace for one of the divisions of Yorkshire. You are Chairman and Managing Director of Hellyer's Steam Fishing Company, Limited; Vice-Chairman of The Hull Steam Fishing and Ice Company; a Director of The Hull Fishing Vessel and Owners' Association; a Director of The Humber Steam Trawlers' Mutual Insurance and Protecting Company, and a member of the Shipping Committee of the Hull Chamber of Commerce?—I am.

1312. Have you considered this Bill?—Yes, I have.

1313. And do you think it would be advantageous for the fishing trade if it were passed into law?—We do.

1314. Are you of opinion that the elasticity of the Bill and the powers which are reserved to the Board of Agriculture and Fisheries are preferable to a hard-and-fast limit as laid down in previous Acts of Parliament?—We should agree to those powers generally; but taking the object of the Bill, which is to preserve these undersized flat fish which abound on the east side of the North Sea, we think that all ports of England and Scotland which are adjacent to that coast should be prohibited from landing such fish.

1315. There is nothing in the Bill to prevent that, is there?—No, I think not.

1316. On the other hand if it were found

Chairman—continued.

that there were some ports even on the east coast where no undersized flat fish from the eastern grounds were landed, it would be possible, would it not, to exempt those ports?—We think they might be exempted if there was no evil done at those ports.

1317. As a matter of fact at the present time, are there many ports on the east coast at which undersized flat fish are landed from the eastern grounds?—Yes, there are a good many; there are Yarmouth, Lowestoft, Baston, Lynn Deep, The Wash, The Humber, Hartlepool, The Tees, and probably Aberdeen.

1318. And you say those fish all come from the eastern grounds?—No, not all of them; those at the Wash do not, those are local undersized fish.

1319. Perhaps the Wash would be one of those places which in your opinion might be exempt, you said that there might be some?—I think not, because the estuary of the Wash is one of the places where the spawn of the fish is subject to be held, the estuary of the Wash is suitable as a nursery, and then those fish return again to the North Sea. Therefore we should not agree for the Wash to be exempted because it is one of the nurseries of the North Sea.

1320. You do not imagine, do you, that it would be possible to prevent the destruction of all the undersized fish in the North Sea?—No.

1321. You

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[Continued]

Chairman—continued.

1321. You would be satisfied if the great majority were preserved?—That is so.

1322. And if so, perhaps the difficulties of getting the measure through Parliament might be considered, provided that your object were attained of preserving the great majority of fish in the North Sea?—Yes. I might say that we fishermen in the North Sea have moved in this matter to protect the fisheries of the North Sea in regard to flat fish, and we recognise that the Bills have failed owing to the immense amount of opposition from these small fishing stations; and therefore we would be satisfied to attain this object by giving the Board of Agriculture and Fisheries this power, provided that it was not misused—as, for instance, as between Hull and Lowestoft, or between Grimsby and Lowestoft. We certainly should not be satisfied for Lowestoft to have liberty to fish on the eastern side of the North Sea if Hull and Grimsby were prevented from doing so, because there is a general purpose in view; that is, to replenish the North Sea as quickly as possible.

1323. As a matter of fact, I understand that there are few, if any, vessels from Lowestoft that do fish on the eastern side of the North Sea?—That is a commercial matter.

1324. But I am asking you whether that is not the fact to-day?—The fact to-day is that the Lowestoft vessels do fish on the eastern side of the North Sea, but further south.

1325. Therefore, supposing the Hull and Grimsby vessels were by regulation under the Bill prevented from fishing there, and it was subsequently found that the changed conditions induced the Lowestoft boats to go and fish there, it would then be possible to include the Lowestoft boats in the prohibition?—Yes; but I think they should be included at once. I do not think there should be any distinction made between Lowestoft and the Humber, because I may say if the Hull and Grimsby vessels were withdrawn the Lowestoft vessels would simply slide a little farther north and get these undersized flat fish.

1326. But it would be perfectly possible to include them if they did?—Yes.

1327. And if they did not, there would be no object in including them?—No, there would not.

1328. It is perfectly well known to the fishing trade which are these eastern grounds, is it not?—Yes.

1329. Can you tell me what amount of foreign trawling goes on there?—It is increasing. Some years back there was no market in Germany or Denmark for these small flat fish. In Holland there was always a trade, because there they dried them and buried them, and dug them up again at some future time and ate them with their beer. There was always a large trade for salted plaice in Holland, but in Germany especially it is a growing trade. We find now that the German trawlers that used to bring the undersized flat fish to English ports have now ceased to do so; and therefore we judge by that that the trade is increasing through the interest that is being taken by the German Emperor in fisheries and all fishery matters; that is to say that these matters are being regulated to the advantage of the fishermen, and no doubt to the ad-

Chairman—continued.

vantage of the German population; and it follows that the fish that used to come to England is now retained in Germany.

1330. Therefore in your opinion it is desirable that we should come to an international arrangement that these grounds should not be fished from?—Yes; but first I think it is right and proper that the English people should take the initiative and carry this thing out and then ask the foreign nations bordering the North Sea to join them later.

1331. You think that would put us in a stronger position?—I think so.

1332. And you do not see anything in the Bill which would prevent such an international arrangement?—No.

1333. Now, we have been told that there is a transshipping trade from the Continent via Antwerp and Harwich; is that so?—That is so; there is a very large trade carried on by scooties or snibs from Esbjerg, on the south side of Horn Reef, which is a Danish port. These boats congregate there and fish from there on the south side of Horn Reef. They have sheds and facilities for packing those fish, which they send up by rail and ship across by the passenger boats to Parkstone and Harwich, and also direct from other places to London. Those fish are coming into London all the year through more or less.

1334. How are they landed? From what vessels?—They are landed from the steamers, I believe, which land at Parkstone, and they come up by rail from there.

1335. Then, of course, it would be perfectly competent to make an order which would prohibit the landing there of that kind of fish from that kind of vessel?—It should be so, of course.

1336. I should now like to ask you a few questions as to the value of these catches of undersized fish. We have been told that in 1892 the value of the total catch of the fleets on these grounds was 69,988*l.*, and of the small plaice, 50,241*l.*, that is to say, that a balance of something like 20,000*l.* was all that was caught of large fish. Is it your opinion, if those figures are correct, that it would be worth while for vessels to go to the eastern grounds if they could not sell the 50,241*l.* worth of small plaice?—As owners of steam trawlers working the single boat system, we do not from Hull go and catch the undersized flat fish. I do not suppose there have been 20 tons of small plaice landed in Hull during 1903; but in the summer time, in April, May, and June, the fleets working in that neighbourhood, if the fish falls short, take the vessels close to the shore and catch the undersized flat fish in order to get the time along when they may be able to get flat fish outside again. During four months of 1903 the Red Cross fleet worked in April, May and June, and the first week in July, amongst these undersized fish, and the average price realised for those fish was about 6*s.* 6*d.* per box of 84 lbs., that is three-quarters of a hundredweight, in the London market. The average price for prime fish mixed with a little offal was 1*l.* 5*s.* 10*d.*

1337. What was the value of the total catch during those months?—The total catch of prime fish was 4,712 boxes, which realised 6,076*l.*

1338. Can

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[Continued.]

Chairman—continued.

1338. Can you tell at all what proportion of that value was for full-sized fish?—No, there is no record of that.

1339. What I want to know is, whether in your opinion, if those vessels were prevented from landing these small fish, the effect would be to keep them off those grounds altogether?—We think so.

1340. Can you substantiate that by any figures?—It is only from the commercial standpoint. When a vessel fishes there he relies not only on the undersized flat fish, but he relies upon a little prime and a few haddocks. As I say, the prime realise 1*l.* 5*s.* 10*d.* per catcher per cutter, and that in itself would not maintain a catcher; neither would the haddocks. Haddocks are rather scarce there; but, taking it as a whole, he can get over the few days.

1341. What reduction of percentage in the value of the gross takings of the vessels would prevent them from fishing on those eastern grounds during those months?—One could not answer that question. I mean that the earnings of the fishing vessels are so irregular that it is impossible to be too dogmatic about a thing of that sort.

1342. Assuming that a trawler working off the Danish coast had a catch, of which 40 per cent. of plaice consisted of plaice under 10 inches, or 60 per cent. under 11 inches, would it be worth their while to go to those grounds for the sake of the balance of larger fish that they would catch?—Their operations vary so much that it is impossible to answer the question. Sometimes the run of fish are a little larger, sometimes they are a little smaller, sometimes the bulk is greater and sometimes it is less; it is impossible to lay down any rule. If we could only know and understand what the general operation of this regulation would be for the prohibition of landing, I mean as to size, we might have something to go upon.

1343. All you can say is, from your experience, that you believe it would have that effect?—That is so.

1344. Can you give us now some information as to the condition of the bottom of the sea in these grounds which have been constantly fished on the eastern side of the North Sea?—Yes, the ground is formed of deltas from rivers in conjunction with sheltered water; that is say the erosion of the land has been, of course, going on for centuries, and there are hard substances which the sea has had to encounter which have remained in the shape of islands and submerged banks, which form protection for the small flat fish in the deltas and inner waters all along that coast, more especially from Heligoland and Horn Reef; and that is the particular part of the coast where the greatest number of these undersized fish congregate.

1345. Your company, the Hull Steam Fishing and Ice Company, have made some very considerable catches of full-sized plaice, have they not?—Yes. During 1902 the plaice increased very much. In 1901 the number of plaice caught by the Hull Steam Fishing Company's vessels was 21,837 boxes; in 1902 the same number of vessels caught 95,619 boxes; in 1903 (1010.)

Chairman—continued.

the catch was 58,331 boxes, so that you see in the year 1902 there was a very considerable increase.

1346. Did you go to other grounds—to fresh grounds?—No, that was in the North Sea; these vessels always fish in the North Sea.

1347. Then there has been no alteration in the conditions?—No alteration at all.

Marquess of Huntly.] Was any part of that on eastern grounds?—No, except in the usual months of April, May, and June; that is all, that applies all through; but the year 1902 was a very prolific year, not only for plaice, but for all kinds of fish.

Chairman.

1348. As compared with the sailing trawlers of 20 years ago, do you consider that the same quantity of fish is caught now per vessel as was caught then per vessel?—Not nearly so much.

1349. I think it has been said that the sailing trawlers used to catch 160 tons a year?—Yes; but that is not a difference owing to the condition of the sailing vessel or the steam vessel. We had to take the North Sea when we first went into it from the Channel when it had never been fished in, and at almost every bank we went upon an abundance of fish were found, although many of them were not edible owing to age and decrepitude, and all that sort of thing.

1350. Are you still opening up new fishing grounds?—Yes, we are.

1351. And therefore do you think the total catches, those very large catches, and sometimes increasing catches, may be due to opening up fresh grounds?—Yes; over one-third of the fish landed in Hull during 1903 was brought from Icelandic waters.

1352. In 1901 there was a very small catch—only 21,000 boxes?—Yes.

1353. Was that not the year of the strike?—We have had no strike in Hull.

Lord Heneage.] The strike was in Grimsby.

Chairman.

1354. You would agree, would you not, that the best possible solution of this difficulty would be an International Convention?—Yes.

1355. But inasmuch as that has been considered for many years past without our getting very much nearer, you think it is time that some legislation was passed in this country?—We do; we think that something should be done, we have been trying to get it done for over 20 years.

1356. If we were to attempt to exclude our own vessels from fishing on those grounds directly by prohibition, would not the cost of policing the area be excessive?—Not internationally between Heligoland and Horn Reef. If you reduce the area of 300 miles by about one-half, where the greatest number of these fish abound, then I think it would be possible for it to be done internationally.

1357. But my question was as affecting our own vessels. Supposing instead of saying to vessels, "You shall not land fish brought from those beds," we said, "You shall not go to those beds

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*Continued.**Chairman—continued.*

beds to fish at all"?—I do not think that would be possible, because you would be interfering with the freedom and rights of the subjects in doing their business, if they were carrying on a legitimate business.

1358. But it would be within the competence of Parliament to do it?—I do not think it would be wise.

1359. That is another matter. Can you hand in any statistics of fish recently caught in Icelandic waters, which I understand is a new trade?—Yes. Previously to 1898 the business was not of large proportions, from Hull in 1898 there were 187 voyages, which brought to Hull 71,360 cwt., and the average per voyage was 381 cwt. In 1899 there were 291 voyages producing 140,947 cwt., or an average of 484 cwt. per voyage. In 1900 there were 287 voyages producing 171,705 cwt., or an average of 598 cwt. per voyage. In 1901 there were 472 voyages producing 343,685 cwt., or an average of 728 cwt. per voyage. In 1902 there were 607 voyages, producing 467,485 cwt., or an average of 770 cwt. per voyage; and in 1903 there were 751 voyages, producing 580,420 cwt., or an average of 773 cwt. per voyage.

1360. That is to say that the trade has been steadily increasing both in the number of voyages and in the average per voyage?—That is so.

1361. And all that has to be added to the catch from the rest of the North Sea, being in addition to what took place before your vessels went to Icelandic waters?—That is so.

1362. And have you been building special vessels for this Icelandic trade?—In Hull we have built about 70 special vessels. That has arisen, I may say, from the disappointment to the owners, as a result of their repeated statements to the Governments of this country as to the injury caused to the nursery grounds and failing to obtain any redress whereby the fish in the North Sea might be increased. We have had to adapt our machinery and our plant to go further afield to bring the fish that the people demand; and the consequence is that we have increased the tonnage of the Hull vessels in about five years by over 20 tons on the average; consequently, it follows that the 70 vessels that we have built are considerably in excess in size and power of those that were in existence before.

1363. What is the proportion of the total catch?—It is one-third of what is landed in Hull.

1364. Then that one-third should be deducted in making any comparison between the catch brought into Hull now and the catch brought into Hull 20 years ago?—Yes. In 1900, when I gave evidence before the Committee of the House of Commons, I made it a complaint to the Committee that the returns of the Board of Trade did not discriminate, and consequently they were misleading as to any information they might give to anyone studying them. An enquiry, I believe, was held by the officials afterwards, and as the result of that, I believe, officers are being appointed at the chief fishing stations. I still think that other reforms can be made in these returns, and a better method of collection

Chairman—continued.

adopted to instruct the public and the authorities as to the conditions and the changes that go on.

1365. At any rate you would not for a moment admit that the figure of the total catch of fish is any criterion of the increase or decrease of fishing in the North Sea?—No; the changes are still continually going on. I believe myself that mackerel, herrings, sprats, and pilchards should be kept separate from ground or bottom fish, because it is with regard to the bottom fish that all these enquiries and difficulties take place. The herring is entirely outside the control of man, and so are all round fish; that is to say, we know that floods of haddocks and cod and these other fish come up from the northern seas at different periods and replenish the North Sea. The haddock follows the herring, and we find at certain periods his body and his flesh so saturated with oil through devouring the herring spawn that it is impossible for the men to handle them.

1366. But for the moment you think it would be quite sufficient if legislation deals with flat fish and leave the round fish alone?—Yes.

1367. Now with regard to the strange variation in the quantity of fish caught in 1901 and 1902, I was right, was I not, in saying just now that 1901 was the year of the strike at Grimsby?—It may have been; I think it was.

1368. And in consequence of that strike a large number of vessels were laid up for a considerable period of the year?—Yes, for three months.

1369. Is it not possible that the enormous increase in the take in 1902 was due to the fact that a great many of the Grimsby vessels which would otherwise have gone out in the summer months to capture undersized fish, were laid up; and those undersized fish grew to be a better value?—Partially, but not altogether. In the latter part of 1902 this increase of round fish took place. In the month of September, 1902, it was first noticed by our North Sea fishers that they were catching innumerable quantities of undersized or small haddock. That also occurred all through 1903. So that there were two factors operating in the increase: one the Grimsby vessels being laid up, and the other, by far the main one, viz., these myriads of haddocks coming into the North Sea. I might say that increase was so abnormal that the haddocks have spread over grounds in the North Sea where haddocks were never found before—in search of food, I imagine.

After a short Adjournment.

Duke of Abercorn.

1370. I think you stated in your evidence just now to Lord Onslow, that the old decrepid plaice was not fit for food?—Yes, first when we went and fished on the Dogger Bank the fish were not edible.

1371. In what sense were the fish not edible?—They were so large and thin that there was nothing but skin and bone, and the fishermen refrained from catching them.

1372. I suppose that was rather an unusual state of affairs?—No; we find it generally on all new grounds; it has been the same in Iceland, and it was the same with the Brixham Trawler in

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catching the soles round to the westward. The first soles the Brixham trawlers caught round to the westward were hardly marketable, they were so long and thin.

1373. Have you made any computation as to what age that kind of fish would attain?—I should say they would be a great age. It is a fact that the fisherman himself never chooses a large fish for his own eating.

1374. Nor does anybody else, if they have any knowledge of it. You are aware with regard to this Bill that the sale is prohibited of undersized fish for the whole of the year?—That is so.

1375. Some people think that a time limit would be sufficient, say five to six months. Is it your opinion that if such a time limit was put into the Bill, it would have the same effect of stopping the sale of undersized fish?—No, we do not agree with that. We recognise this difference in the mode of fishing—that it is carried on in two ways; first by single boaters, and secondly by fleets. The fleets combine; or in other words a number of steam trawlers fish in company whose catchers are ferried to the carrier, and thereby the catch of that particular fleet is sent direct to London. There are 160 vessels working in that way from Hull who send their catches direct to London, and during 1903 1,050,000 cwts. of fish were sent in that way to London direct. After the month of August it is not safe for that body of vessels to work in conjunction one with the other on that coast, because the equinoxes begin to put in, and the longer nights, the coast is so low and indistinguishable that it is not safe for a number of vessels working in fleets to work on that side, and therefore they withdraw; then the single boater begins to operate. Therefore, we think it is advisable to make the limit for the whole of the year.

1376. Supposing the closing did not take place for the whole of the year, it would be rather difficult to stop that influx of foreign fish which you say comes into England through Harwich?—Of course there is no law that we can adopt that will prevent the foreigner from catching that fish if he thinks proper, but we can prevent its being landed on the English coast.

1377. And I think you and another witness have stated that the largest amount of fish comes into England through that channel?—Yes, we believe it does; in fact, we know it does.

1378. You also stated that the foreign trawlers are increasing?—Yes.

1379. Are they subsidised as a rule by their Governments?—Assistance is being given to syndicates to develop the industry, and especially by Germany and France, we understand, by money loaned at very low interest, and even no interest paid at all, until the industries come to a certain state of prosperity. And we know for a fact that the French people especially are coming and buying large numbers of steam trawlers from England, and in that way they get the exact shape of the machine, and so on, and then they build afterwards from the examples they have bought.

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Duke of Abercorn—continued.

1380. We have had it in evidence that on the far east fisheries there are about 1,200 English trawlers working, and about 200 foreign trawlers. If the foreign trawlers are increasing in number, it might possibly add to the difficulty eventually of policing those waters and in the event of any International agreement being come to to prevent fishing during certain months, or entirely during the whole year, in those waters?—I hardly gather your Grace's question.

1381. At the present moment we have 1,200 trawlers, say. I suppose, if we endeavour to police those waters, we should have to provide boats *quoad* the number of trawlers with regard to the amount of English vessels?—But there are never more than about 300 fishing on that side at one time. I should say that is the maximum number. As a rule it will not carry two fleets, it will only carry one. If one fleet works the small plaice alone and sends the produce to London, it may find a paying market. If two fleets work the same article it cannot pay—the market cannot take it. It is only the very poor of London, as a rule, that can take that fish.

1382. Do the big-sized fish in the deep water occupy only a certain space, in the same way as you might imagine in game? Game only occupy a certain space in any locality, and go off to other districts. Would it be the same for fish, or would any amount of fish, irrespective of the size of the ground, occupy that ground; or, if they found there was not sufficient food, would they go off to some other district?—We believe that the whole migration of fish is governed by two principles. One is the operation of coming together to fructify the ova, and the other is in search of food, and that the one which predominates the most, because it extends over a longer period of time in the life of the fish, is the search for food. We know from observation that the spawn is carried by the currents and by the wind to certain shores where it comes to life, especially on the east side; it is then sustained in this oozy ground, which is necessary for the young flat fish life, because it cannot live on a hard bottom, because it cannot bury itself easily without injury, and therefore it is necessary for young flat fish life that the ground should be of an oozy, soft nature, so that it can easily bury itself. There it accrues strength and growth and gradually works back into the deeper water, and when those fish are a year, or two years old, we find, mid-way between the east side and the Dogger Bank, in what we call the scruff, then they are plaice of about a foot long.

1383. Are there a large number of spawning beds along the coast of the British Isles?—I think not as many as the authorities think. There are no spawning grounds, in fact, in my opinion, that fish go to a bay or an estuary to spawn. The flat fish spawns where it is living and getting its food. That spawn is influenced by the tides and winds and carried wherever those influences carry it.

1384. But I suppose you are of opinion that wherever the spawning beds exist along the

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Duke of Abercorn—continued.

coast of the United Kingdom, those should be as far as possible protected?—Yes, that is so, and I think they are clearly defined. On the east coast we believe they are the estuaries of the Thames, of the Wash, of the Humber, and of the Tees; and the spawn that is floating on the west side of the North Sea, that is on the English shores, is influenced by local tides; which extend about 30 miles easterly from the coast. Beyond that line, the wind alone operates upon the sea, and carries the spawn to the east side of the sea. We have very strong proof of that, because in working our fleets they frequently lose fish boxes overboard, and things of that nature which are floatable, and these are all found on the east side of the sea. They are never found on the west side, which is an absolute proof of the action of the wind and current in carrying flotsam to the east.

Marquess of Huntly.

1385. You said that the foreigners were increasing in their trawling in these seas?—Very much so.

1386. Then although you look upon this measure as an advantage, as a tentative one, you look forward to an International arrangement to exclude all trawls on these eastern grounds?—To exclude the landing in all countries. I believe at present they have some prohibition in the continental countries as to landing their flat fish, although I believe the size is very small. I think it runs down to as low as 5 inches in France.

1387. Your opinion is that if England took the lead there is a prospect of making an agreement by International convention that these small fish should not be landed during the breeding months?—I think there is a very good prospect?

1388. And it is worth trying?—We think so; but we think we should begin at home; we should take the initiative—we should set the example.

1389. We had it in evidence from Mr. Archer that there is great difficulty about an International convention, because if France agrees Germany will not, or if Germany agrees France will not?—That is all the more reason why we should carry it out on our own action, because we are more dependent upon the fisheries than any other nation.

1390. They might increase their number of trawlers, and then the grounds would be depleted just as much?—I do not think any other nation are so naturally adapted as fishermen as the English people. If you look at the history of the past, all through you will find that the value of your fish has exceeded that of any other country. Take the United States: they calculate their weight of fish by pounds; we calculate it by cwts. I should say more fish is wasted in England than is used by any other country; and one of the great sources of waste is the exorbitant railway carriage because we in Hull have caught 2,500,000 and odd cwts. of fresh fish, which has averaged in Hull a penny a pound: the sale has averaged a penny a pound

Marquess of Huntly—continued.

for turbot, plaice, brill, cod, skate, and all kinds of fish. That portion we have sent direct to London by water has averaged a small fraction over a penny; that is what the fisherman gets for his produce. Therefore it follows that at many times during the year the fish has not made a half-penny a pound; and the reason of that is, that there is no merchant, when the fish is so cheap and plentiful, who dare venture to incur the great expense of the railway charge, besides ice, twine, labour, and so on, to risk sending that fish to a commission market; and as a consequence a great deal of it is wasted, and what we call "mucked away," which will be used for different things altogether foreign to what a fresh article of diet like fish should be used for.

Duke of Abercorn.

1391. In fact, I suppose everybody connected with the fishing industry in England complains of the high railway rates?—It prevents the fresh fish getting to the public inland. It is wasted to a very great extent on the coast. I should say the fish from Iceland does not average more than a halfpenny a pound to the catcher, and he goes a thousand miles, and finds the machinery and ice and labour and everything and sells it in England at a half-penny a pound.

1392. I suppose you do not know anything about the herring fishery?—No.

Earl of Yarborough.

1393. Did I correctly understand you to tell the Duke of Abercorn that your trawlers went to the eastern grounds in the summer months?—Yes, spring and summer.

1394. And that is when most of the damage is done?—That is when most of the damage is done.

1395. How long do they remain out there on their voyages?—It varies; generally about ten days—from a week to ten days.

1396. What is the size of your trawlers?—The latest trawlers built for the Icelandic fishery are 130 feet long, with about 80 horse power, triple engines, and boilers with 200 lbs. pressure of steam, capable of carrying 150 tons of bunker coal, 40 tons of ice, and all necessary stores to prosecute a month's fishing all contained in itself. The North Sea trawler is of smaller size, of course, and less capacity for carrying coal and so on, because it is not necessary to stay out so long; but in going to Iceland we have to steam from 1,000 to 1,200 miles to get to our fishing grounds. Then we have to take all the vicissitudes, in catching fish, of changing grounds and so on, and to bring it back to England; so that you see the necessity of adapting the vessels to that business; owing, as I said before, to the disheartening fact that the authorities will not do anything to try and prevent this destruction. We believe that in a couple of years, if those fish were left alone, they would work back and replenish the North Sea again, as they have done in the past. Those fish always did exist there on the banks of the North

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Earl of Yarborough—continued.

North Sea when the larger fish were being caught further off, I may say.

Lord Heneage.

1397. I think you stated that you thought some of the ports might be exempted. Is not that the reason why the largest power should be given under this Bill to the Board of Agriculture and Fisheries, and not to have a hard-and-fast rule?—Yes. I do not say that as an Englishman; I do not admit it as an Englishman. I simply admit it as a matter of policy to get the measure. I never can agree to the differentiation of one man being allowed to catch undersized fish and another not.

1398. For the landing?—Yes. Of course he would not catch it unless he could land it. But as a matter of policy I for one would agree to giving those powers to the Board of Agriculture and Fisheries, on the understanding, of course, that they would safeguard one station as against another, or one trader, if they found afterwards that it would infringe upon catching that undersized fish.

1399. And that is the unanimous feeling in Hull?—That is the unanimous feeling in Hull. We have faith to believe, now that this new Fishery Board is appointed, it will conserve and protect the interests of all fishermen belonging to England. We have suffered, of course, up to now, from too much Scotch legislation. The whole of the fishery legislation of this country has been dominated by Scotland; there is no doubt about it.

1400. And in your opinion, unless there is some such legislation as that now proposed, it is utterly impossible that it can be effected by any combination of the trade among themselves?—Yes, we ask to be saved from ourselves.

Lord Northbourne.

1400A. You are chairman of this company, are you not?—Hellyer's Steam Fishing Company.

1401. Are there any other companies of the same kind in Hull?—Yes, several; we have 382 steamers in Hull.

1402. Belonging to your company?—No, in Hull altogether; and I am deputed to represent those 382 vessels.

1403. In the fishing industry, besides the deep sea trawlers, there are those that trawl much nearer the coast?—They are still deep sea trawlers. The largest quantity of fish that is caught is caught by deep sea trawlers. I will take a Brixham vessel; he is a deep sea trawler; he is the one origin of deep sea trawling, the mother of it all. If you come to a place like Hastings, if you wanted fish for breakfast to-morrow you would not have to depend upon the Hastings boat to get it. It is a spasmodic, amateur affair altogether; it is not a commercial affair. Probably if you go down in a month or two's time they will take you out for a row or a sail. I do not depreciate those small places when I say that, but we think this matter is of much greater importance than the consideration of one man as between him and another, or a large place as against a small place. It is a question, first, whether we are of opinion that this destruction is going on, and has been going on,

Lord Northbourne—continued.

amongst these undersized flat fish, and whether it is wise and necessary to try and prevent it. If it is, we think if a man is catching a basket of fish a week, it is not fair to stop a measure of that kind for the consideration of that man, in the public interest. We have nothing to say against the man.

1404. Do I gather from that, that some of these small fishing industries at a place like Hastings would be opposed to this Bill?—I should say they would.

1405. On what grounds?—Because they would say probably the North Sea trawler, if you stop him from catching flat fish, will go and catch haddocks. If it was a Hastings man he might say, "We have no haddocks to catch." But in relation to that point I do not suppose anyone will suffer so much as the steam trawler owners in the ports of Grimsby and Hull if this measure comes into operation.

1406. Would you say that the opposition of these smaller industries is the opposition of ignorance?—I believe it is a great deal prejudice. There is a great deal of prejudice against steam trawlers. It is a modern appliance to do the work in a better and more expeditious fashion, and a more certain fashion to do the work. People round the coast have antiquated appliances such as the hand line or long line, and they naturally feel aggrieved when some new machinery has come and made the other obsolete. We have had all that experience. I had 12 beautiful sailing vessels when steam trawlers were introduced, and as soon as the first trawler put in an appearance 50 per cent. of value had gone out of my vessels. The result was, I had to go into steam trawlers. That has been the operation of all improvements that have come into this country; but you cannot stop progress, and you cannot stop the demand of the people for fresh fish.

1407. But these people may not be very influential or numerous?—That is the unfortunate part of it, especially from Scotland. I mean to say, in confirmation of that, that I believe there is really only one interested Member of Parliament to interest himself on behalf of the industry of steam trawlers; that is our friend Alderman Doughty. There is no other who has taken up the interest of the steam trawlers against the innumerable interests that flood into the House of Commons to prevent a grand measure of this kind. And again, the steam trawlers, instead of being hailed by the public and by the authorities as benefactors to the country in spending money to bring this product to the people, are looked upon as the greatest enemy that ever came into the North Sea. That is the awful position the trawlers are in. All these other interests are listened to and heard, but the steam trawler is a thing that has no right to be—it is almost considered to be illegal, and all sorts of humbug. That makes it very difficult, no doubt, for legislators to understand the question.

1408. But if you can sufficiently prove that the destruction of these undersized fish is prejudicial to the general supply, do not you think this opposition will subside and be overcome?—I am afraid not, because a man will look immediately

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[Continued]

Lord Northbourne—continued.

diately to his own pocket for this week and next week; he will not consider the general benefit that will come in a year or two.

1409. He takes a very short view of life?—Yes—"It will last my time."

1410. That is the opposition you think that is most serious?—I think so.

Chairman.

1411. There is only one question I should like to ask you, and that is with reference to the increase of the German trawlers. Is it not the fact that although they increased up to a certain point, in the last two years there has been a falling off in the number of German trawlers?—I believe they have not increased at the same ratio. It is a new business, of course, in Germany entirely. We from Hull and Grimsby used to send all the needs in regard to fish to Germany; we used not to smuggle them in, but to disguise the fish; that is, the fish must not be gutted. Then those fish could be sent to Germany, and they were considered to be the product of Germany. But since then they have gone in for steam trawlers; and the capacity of the country, I suppose, will only take so much fish and naturally the business is not very

Chairman—continued.

progressive, the people have not that enterprise themselves, and consequently it is a stagnation affair with them; at least, it is not progressive now.

Lord Northbourne.

1412. Do you know anything about the steam trawling industry on the Tyne?—Yes; it is just a branch from Hull. They are all branches from Hull and Grimsby.

1413. In numbers and importance how does it compare with Hull and Grimsby?—There is no comparison. Hull itself catches over one-third of the trawl fish of this country, and it catches more than the whole of Scotland and Ireland put together by 300,000 and odd cwts.

1414. Do you know anything of trawling at Ramsgate?—Yes, I know Ramsgate. Ramsgate was made into a fishing place by Brixham people gradually migrating to the North Sea, and a certain number remained, but very few. They just fish in the Channel between there and France.

1415. They do not go into the North Sea much?—No; they do not go into the North Sea much. They are very small vessels.

The Witness is directed to withdraw.

MR. GEORGE LOWE ALWARD is called in; and Examined as follows:—

Chairman.

1416. I think you are a member of the North-Eastern Sea Fisheries Committee, are you not?—Yes, I am.

1417. And you have been deputed by the chairman and members to give evidence on their behalf?—Yes, I have.

1418. Are you also connected with the fishery industry in various branches?—Yes.

1419. Have you ever spent any time at sea as a practical fisherman?—Twenty years.

1420. This question of the diminution of flat fish in the North Sea and the remedies for it have occupied the attention of the fishing industry for many years?—Over 20 years.

1421. Do you believe there has been a diminution?—Yes, I think without a doubt we have all come to that conclusion.

1422. And from what cause?—From over fishing; concisely speaking, it is really over fishing.

1423. In any particular part of the North Sea?—First of all in our original old fishing grounds. We denuded those, and found less year by year as time went on. We then discovered new grounds, with in process of time, the same result. In going back originally, say to about 1830 up to about 1890 we found, at ground after ground, after being fished for a few years, the same results; the fish became scarcer and scarcer.

1424. Have you seen and read the Bill which is now before Parliament?—I have.

1425. Do you think if it is passed into law it will have the effect of preserving some of the undersized fish which are at present destroyed?

Chairman—continued.

—I think the object of the Bill appears to have that purpose.

1426. Do you think it would be well to have a defined size limit in the Act of Parliament, or to have it left to the discretion of a Government department to vary that size limit in accordance with the experience obtained under the Act?—If the department had in its mind a uniform size for all places, then leave it in the discretion of that department; but if it has in its mind a varying size, according to different localities, I say put definitely in the Bill a size.

1427. But you remember the Bill of 1900?—Yes, I do.

1428. I had proposed a limit of 8 inches for plaice. Would that be sufficient in your opinion?—It is not sufficient, as decided by the whole of the fishing trade, but I think we accepted that as a first instalment by way of getting prohibition.

1429. And then you would proceed by a further application to Parliament, if it was found necessary to raise that limit?—I should agree if you fix the size. I have always said, get the thin end of the wedge in, and when you have got the size limit fixed at all by an Act of Parliament, then, of course, experience must be brought to bear as to what the exact size should be; but amongst ourselves we have already discussed that for 15 years, and decided it, I think, some years ago.

1430. How many years is it since legislation upon this subject was first introduced into Parliament?—I could not say quite.

1431. Was it 1895?—Probably it was. I have

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Chairman—continued.

a very clear recollection of approaching the question as to the necessity, which was in 1886.

1432. Suppose the Bill proposed limiting the size of plaice to 8 inches, do you think it would do to wait another nine years before you increased the size if the 8 inches were found insufficient?—Individually I would be satisfied; but I fancy the trade would not be satisfied. I have always considered myself that we had far better fix the size low enough, so as not to engender too much opposition from those small inshore people. Compromise the matter by making the size smaller, and then it would be for the Department to watch the thing and see what is the best size to be adopted ultimately.

1433. Are you aware that several of the Bills which have not received the Royal Assent were promoted by the Department?—Yes, I am fully aware of that.

1434. Do you think that any Government department would be more successful in the future in getting measures through Parliament than they have been in the past?—I think there is not quite so much opposition exists now as there did formerly. First of all our difficulty was to convince ourselves of the necessity of restriction. That I think occupied about five years. I think I can remember taking a very active part in this idea in 1886 in our own town. We have many times individually spoken on the question, and it fell to my lot to introduce the thing publicly, and we discussed it very fairly; and I think from that time onwards there seems to have been a general opinion that there was a diminution of fish on certain grounds, and then we gradually came to the conclusion, with a little more experience, that it was general all over the North Sea, with flat fish more particularly.

1435. But I think you admit that the trade would not be satisfied with a limit of 8 inches for plaice?—I think the trade would not be satisfied.

1436. And your only object, therefore, in consenting to a limit of 8 inches would be to facilitate the passage of a measure through Parliament?—That is so.

1437. If you could get a Bill passed which would enable a Government department to raise the limit to such a size as would be acceptable to the trade, do you think that would be an advantage over a fixed limit of 8 inches only?—I did not quite follow your question.

1438. I say, do you think that it would be a greater advantage to accept this eight inches limit and have it put in the Bill, which you admit the trade would not accept, or to have such elastic powers given to the Department that they might fix the limit at such a point as would be acceptable to the trade?—As a matter of policy, I should say take eight inches because I think the eight inches would minimise the opposition from the direction which the opposition comes from, because the opposition comes from the small inshore vessels and the smaller class of deep sea vessels which fish in that part of the sea where they say a large portion of their catch consists purely of very small fish.

1439. Then the scientific gentlemen have informed you this morning that there are two

Chairman—continued.

races of fish, which, to my mind, is a perfect farce; but it is perfectly true that south of a certain latitude during this last 20 years we have not found such large fish. Those vessels which continue to fish there never get those large kinds of fish. I remember, as several other witnesses do, of 45 years' experience, that the grounds they are fishing on now, which they say have no large fish, abounded in immense millions of large, fine plaice. They have gone. They have become extinct. They have not the time to grow. Now, I am desirous of meeting those people to some extent.

1440. If you think that as a matter of policy it would be better to limit it to eight inches in order to get the Bill passed, how do you account for the defeat of the Bill of 1900, which proposed a limit of eight inches?—Well, I am really not thoroughly acquainted with Parliamentary procedure, but I know what I have said to various Presidents of the Board of Trade to whom I have been a delegate from the North-Eastern Sea Fishery annually. I have oftentimes said that if Parliament desired it and the Government desired it, the Bill would have been passed and could have been passed long ago.

1441. You have attended most of the conferences of fishery committees at the Board of Trade?—Yes.

1442. Were you at the one in 1901?—Yes.

1443. Do you remember Mr. Ritchie's explanation of the reason why the Bill of 1900 failed to pass?—Yes, I think I have a recollection of it.

1444. Was it that when it was suggested that this Bill was one that might not meet with much opposition, there was a chorus of disapproval from all parts of the House, which made it impossible to proceed with the Bill? Was that the reason Mr. Ritchie gave?—I think I remember his remark was the enemies were there in large numbers but the supporters were absent. I think shortly that is about what he said.

1445. Do you think the enemies have diminished since 1900?—We have an idea, having settled amongst ourselves the necessity for legislation, that there is a very small minority indeed who still protest against any legislation, that we have dwindled it down to a very small minority.

1446. Does any of it come from Grimsby?—No, I think not. I think Grimsby has spent time and money on this question more than any town in England. The agitation commenced in Grimsby, and I think I may say I had much to do with starting the question for discussion whether it was not time that legislation should take place; and we have kept continually agitating and discussing; and our great troubles were originally, what should be the size? First of all it is necessary; and then, what shall be the size? I think we made up, as amongst each other, what the size should be, and then we went to Parliament and asked for legislation. There still was an opposition, and there will be an opposition. Do whatever you like, there will be opposition.

1447. I suppose you agree with the other witnesses that the main object of any measure should be to protect the eastern grounds from trawling

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Chairman—continued.

trawling during certain months of the year. Is that the first object to be aimed at?—Well, that is a question which really wants a little explanation. I do not think it has been clearly stated that we are getting now in the North Sea, to us unknown years ago, immense quantities of fish, and it is quite evident that the fishing out those large and matured fish has given place to the small ones to feed, and they grew in large numbers more than they did when those same grounds were fairly well stocked with large fish; and we have during this last four years experienced what we never anticipated. The general trait of the matter was this: that on those grounds in the North Sea which you refer to on the east side (where you have had full explanation that they abound with those small fish), what we found was, close into the shore small, a little further off a little larger, and a little further off still larger; say three years fish, off about 25 or 30 miles; about two years fish, off about 15 miles; then right into that shore, the new fish of last year. Now the fact is that off in the deep water there are not so many large fish, and during this last three or four summers, while the fine weather was on, we had an abundance of small fish scattered over parts of the North Sea where we never saw them before.

1448. Beyond these eastern grounds?—Beyond the eastern grounds.

1449. Then you do not consider that a material benefit would accrue to the fish of the North Sea if trawling were prohibited during certain months of the year on the eastern grounds?—I think the question of attaching prohibition to any ground is a very dangerous and difficult question. If you confine legislation to the fish itself, caught by whom you like and caught from where you like, then I think you accomplish the object. But if you try to locate (I think our conferences have discussed that point very closely) you get yourself into great difficulty, and I do not think we accomplish the end. It is a question of the fish; it is not a question of where it is caught. Confine it to the fish itself, because the difficulty is: how are you going to differentiate where that fish was caught.

1450. Supposing your limit of 8 inches were accepted and put in the Bill, do you think it would have the effect of preventing the steam trawlers from going to those eastern waters?—Yes, I think it would naturally compel vessels to go to places where the fish was not so small, and whether it was on those eastern waters or wherever it was it would accomplish that object.

1451. Accomplish what object?—Accomplish the object of preventing the catching of this undersized fish, and preventing the landing of them, caught wherever they may be.

1452. Do you go so far as to say that if the trawl is put down, any measure would prevent the catching of these fish if you go on the grounds where they are?—It would be no use to catch them if they cannot be sold, you know.

1453. But do you mean to say that the trawlers would no longer go anywhere in the North Sea for fear they should catch the small fish?—No: but as soon as they discovered they were on the ground where the small fish were,

Chairman—continued.

and the fish would not pay them, they would go away; they must desist.

1454. They would leave the ground wherever it might be?—They would be bound to do. I should like to point out that in the estuary of Boston of the deep—which is a wonderfully prolific place—those fish move off some miles into the sea, and we have a very large quantity of our trawlers go and fish outside the 3-mile limit there. We do not want those fish bringing into the market any more than we do from the east side of the North Sea. And at that particular place I remember that at the North Eastern Sea Fishery Committee, whose duty it was to assist in an enquiry for drawing up byelaws, one of our great difficulties was that we found in that locality those small fish being caught with horses and carts on the shore by tons, denuding the west side of the North Sea of all those natural supplies. Our byelaws put a stop to that; and consequently we think we have done an immense amount of good. But still those fish, when they grow to 5 or 6 inches, get some little distance off to sea and outside of the 3-mile limit, beyond which we have no control as a Sea Fisheries Committee. Our steam trawlers catch those. We do not want them to catch them. We want them preserving until they get a little larger and go further off to sea, and it is more a question of size. It is perfectly true that the locality described as the east side of the North Sea, where they abound in such vast numbers, is one part of the question. But this small fish question is the whole question.

1455. Then, notwithstanding the great difficulty which has been found in passing an Act of Parliament with a hard-and-fast limit, you would prefer to see such a Bill or no Bill at all?—Well, if the Bill has no ultimate good effect, why have the Bill?

1456. Then your answer to my question I take it is, yes?—No, I prefer the Bill.

1457. You prefer the Bill as it is to no Bill at all?—Well, I think I must say yes; but of course we have anticipated that there never has been a Bill tabled, either in your Honourable House or in the House of Commons, but what has been subject to some amendments, and we have thought it possible to suggest some amendments, slight perhaps, which would accomplish the object we have in view.

1458. But you admit, do you not, that your knowledge of Parliamentary procedure is perhaps more limited than those whose duty it is to pilot the Bill through Parliament?—I admit that.

1459. I do not know that I quite clearly get from you whether you have gone into any calculations as to whether it would be no longer commercially profitable for the Grimsby steam trawlers to go to the eastern grounds if they were prevented from landing an 8-inch plaice?—I believe it would regulate itself. I believe that if they went on to those grounds and they found that nine-tenths of their haul was immature or undersized fish, the thing would regulate itself, they would not go there: they would go away somewhere else.

1460. But would it be so?—Naturally.

1461. Would

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Chairman—continued.

1461. Would an 8-inch size limit be sufficient to make it commercially unprofitable for them to go?—No, it would not distinctly.

1462. They would still go. What limit do you think would make it commercially unprofitable for them to go to those grounds?—A 10-inch limit.

Lord Northbourne.

1463. If you gave power to the Department to frame byelaws, and they framed a byelaw for Grimsby, where opinion you may say is almost unanimous for the Bill, do not you think that places where there was a strong opposition would in a short time follow suit?—I take it, perhaps you might say, that that would be so, judging from our experience of the byelaws of our Sea Fisheries Committee.

1464. If you think that would be so, do not you think that would be preferable to having no Bill at all?—The question of leaving the fishing community to settle their own differences is a very dangerous one. I know we have had a great deal of difficulty in times gone past on many questions, and this trade prejudice which has been put so strongly before us has a very great deal of weight; and I know the Department will have great difficulty if it has the whole of the discretion left in its hands without any direct instructions.

1465. What do you mean by trade prejudice?—Well, for instance, the prejudice, as I understand it to-day, is this sailing trawler against the steam trawler. We are told that there never would have been a question of putting any stop to the catch of small fish if the steam trawlers had not caught them in such immense numbers; that you would have left it alone with the sailing vessels. That is the way it is put: "It is you that do all the depredation"; and "It is you that wants legislation—not us"; and "We are not going to assist you to get legislation."

1466. Then I suppose that is something more than prejudice; it is something that affects the pocket?—I think that the question has been put thus: If you find that in the North Sea the fish is gradually getting less, it is getting less for the sailing vessel as well as it is getting less for the steam boat. And if his Lordship will permit me, I think in those Notes of Evidence when that question first came under discussion in 1886, I commenced to get out some statistics of the sailing vessels just about the time that steam trawlers were coming strongly to the front. I have not troubled the Committee with, year by year, the falling off; I have confined it only to those plaice, not to the soles and the other flat fish; my figures really embrace all kinds of fish, but for the purpose of showing how the thing became so alarming in our minds, I took out four distinct vessels of our own, similar in size, fishing on similar grounds in the North Sea, to see what had been the catch in 1875 as compared with 1892, taking year by year, but for the purposes of this Committee simply giving the first and last years. Now there are the four ships. These are the figures obtained to satisfy ourselves what was going (0.10.)

Lord Northbourne—continued.

on. In 1875 the first ship had caught 585 cwts. of those plaice. During those years she fell down to 164 cwts. of plaice for the 12 months. That was the whole of her catch for 12 months. The next vessel in the first period, 1875, had caught 298 cwts. of plaice, and in the last period only 126 cwts. of plaice. Now the next one that followed had caught 506 cwts. in the first period, and had fallen down to 194 cwts. The fourth, and last, in 1875 had caught 557 cwts., and she had fallen down to 198 cwts.—the same vessels fishing on the same grounds, showing that there was a gradual falling off in this fish. Then the other remarkable thing was this, that in proportion as the fish fell off, so the prices went up. In the first period they were satisfied, and could make a living by selling that 585 cwts. of plaice for 9s. 4d. a cwt.; in the last period it fetched 22s. 6d. a cwt. Taking the next stage, a vessel which probably had a bigger kind of fish, and perhaps had been fishing principally on the locality where the fish may have been a little bigger, hers fetched 13s. 6d. a cwt., and in the last period 21s. a cwt.; in the next case it was 12s. a cwt., against 25s. per cwt.; and in the last case 13s. a cwt., against 22s. per cwt. That is what has been going on and did go on, until we increased our method of fishing so that one steam trawler caught as much as five of those vessels; they cost five times the sum of money and caught five times the quantity of fish. Thus we keep up the supply of fish for the necessities of the people.

1467. Then your steam trawling industry is an improving industry?—Yes.

1468. And the sailing vessel is rather a decaying industry?—The sailing vessel, so far as we are concerned, has become extinct. We had in 1890, 829 of those sailing vessels; we have none now.

1469. Who are your great opponents, then?—The opponents are Lowestoft and Yarmouth and Ramsgate and those places.

1470. But they have sailing trawlers, have they not?—Yes, they have sailing trawlers.

1471. But that is the quarter from which your opposition mainly comes?—Yes.

1472. Do not you think that if you can show a sufficiently overwhelming case, that opposition would decrease; you admit it has diminished?—I do not know how we could show an overwhelming case. We simply show that we are getting less fish and the public are getting less than they want, and we are going forth into the ocean to find it.

1473. I mean by an overwhelming case, if you can prove by scientific and other evidence that the destruction of these fish diminishes the supply?—The House of Commons had that before them, still they have thrown out the Bill; they have thrown out three Bills, and the President of the Board of Trade has had those figures and various figures of that description before him.

1474. Do you reside at Grimsby?—Yes.

1475. Do you know the other parts of the north coast?—I think I know every part of England where the trade is carried on.

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1476. Do

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Lord Northbourne—continued.

1476. Do you know the trade of North Sunderland?—Small lining vessels.

1477. Are there any steam trawlers?—No, I think there are 64 ports in England in which they have steam fishing vessels, and Grimsby and Hull I think own the greater proportion.

1478. Are there no steam trawlers from Brixham?—Not one, I think—not owned in Brixham.

Lord Heneage.

1479. You stated that the opposition is a minority and a small minority, that is as regards the number of owners of vessels and the quantity of capital embarked in those trades?—That is so.

1480. But notwithstanding their having a small amount of capital in those trades and not having much experience of the North Sea, they have a very large representation in the House of Commons, have they not?—Yes, they have.

1481. And that representation is not diminishing?—It is not.

1482. Therefore whilst a few ports, Hull and Grimsby and Aberdeen, have only some half dozen representatives, they have got some 30 or 40 all round the coasts of England and Scotland; each little village has its own representative?—True.

1483. Therefore the real difficulty is, not the question of the amount of capital and the amount of the individual opposition round the coast, but the number of Members who will go into the Lobby against the Bill?—That is it; it is the votes in the House of Commons.

1484. Then will you not take it from those who know something of the composition of the House of Commons, that though the opposition may have diminished round the coast, the opposition in the House of Commons has not diminished?—The probability is that that is the case.

1485. That being so, do you think that if Mr. Bryce was unable to carry the Bill in 1895, Mr. Ritchie, in 1896, and again in 1900, in addition to the two Bills that went down unanimously approved by the House of Lords as introduced, there is very much chance of getting any Bill drawn upon those lines past the House of Commons?—If the lines upon which this Bill is now drawn will neutralise the opposition, the case is yours.

1486. You mean that then you would support this Bill rather than have no Bill at all?—I would.

1487. Distinctly?—Yes, distinctly.

1488. At the present moment, so far as your evidence has gone, your only objection to this Bill is that there is not a limit of 8 inches for sole and plaice in the Bill. Practically that is the only objection you have raised to the Bill?—No, that is not the only objection. The objection I raised was that we should have liked much better to have seen distinctly in the Bill, that when byelaws or conditions were laid down they were to be laid down uniformly for all vessels.

1489. I will come to that directly?—That is really the opposition you see.

Lord Heneage—continued.

1490. But the great amount of questions that were asked you by the Chairman were practically on this 8-inch limit. Now this 8-inch limit has not been, so far as you know, mentioned at any meeting, either of the executive or at the annual meeting at all, has it?—It has not.

1491. And you yesterday seconded an amendment in which the plaice were put at a limit, not to exceed 11 inches, soles not exceeding 10 inches?—That was the maximum, was it not?

1492. That is my point. Therefore you preferred to give that elasticity then to the Bill?—Yes.

1493. But under the Bill as it is now, the Department can begin if they like at 8 inches, but can raise it to any amount; therefore if your amendment was to be carried out it would be better carried out, would it not, by the Bill as it is drafted than by putting 8 inches hard and fast into the Bill?—The reason why I did raise the question of 8 inches in answer to his Lordship was, that I thought it might minimise the opposition; because the evidence that you have had before you when you have talked about the 10-inch limit has been from people who have given evidence before now, and even on this question, who say "you must not limit us not to catch fish under 10 inches. Why leave out 10-inch fish?" That is what some of them say. I say to meet their objection, if it was possible to meet their objection, then by way of compromise I would put in 8 inches and then leave the Department the discretionary power to see how it worked.

1494. You would leave them the discretionary power to see how it worked; but supposing it worked badly, would it not then be necessary to go to Parliament again to get further legislation to enable them to increase it?—I cannot say that, because I do not know really with Bills of this description what elasticity there is in them. I am not a connoisseur of Acts of Parliament and the wordings of Acts and that sort of thing; it might be so.

1495. But you know if the 8-inch limit was to be the maximum limit by this Bill, no Order could be issued by the Department raising that limit over the 8 inches?—If you ask me whether I prefer to put it in as a maximum limit, I say no, by no means. I simply name the limit; and I think in those former Bills we neither said maximum nor minimum, did we? Yes, we said "not exceeding," that there should be no tampering, I believe, beyond 10 inches. Of course, we can put it now, that nothing beyond 8 inches should ever be interfered with unless Parliamentary opinion was taken again.

1496. Yes?—I know that is a difficult question. And if that is so I prefer the thing as it is.

1497. Yes, if you take my word that is how it would have to be drafted to meet your wishes. You would prefer to give the elasticity to the Bill as it is now?—Yes.

1498. I think I may pass from that. Then the other question which you said you raised was the uniformity round the coast?—Yes.

1499. That appears to me to be one of the great

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[Continued.]

Lord Heneage—continued.

great difficulties we have to contend with; therefore is it not better to follow out the advice given by Mr. Hellyer, and leave it to the Board to exempt here and there, if they think fit, some small fishing village and the landing of fish at that place?—If the Board would like to take that responsibility, so far as I am concerned they are welcome to it; but all I can say is that they will find they have taken upon themselves a very serious difficulty.

1500. But the President has taken that responsibility by introducing the Bill, has he not?—Yes, he has.

1501. I think the Chairman asked you a question as to whether you thought that the prevention of landing under the Bill by an Order would be effectual with your fleets. Is it not the fact that now at the present time nearly all the men are share men to a certain extent, and therefore they have an interest in the catch?—Yes, I think we may say the majority.

1502. The engineers are included now amongst the share men?—In some ports; in Grimsby in some cases, but I do not think in all.

1503. At any rate the skippers and second hands are?—Yes, the principal hands.

1503. Therefore you think they would not go to any place to catch fish which they could not sell if they landed them?—Naturally so.

1504. Then I think I may take it that you are perfectly prepared to support this Bill on behalf of Grimsby in such shape as it may come out of this Committee, rather than give up the Bill with a view to any other hard-and-fast legislation?—You may take it as a fact that I shall with all my heart support the Bill if his Lordship will do what has been said, try if possible to make some little compromise in the direction which we have been asking. What that compromise may be of course I should leave to those gentlemen who represent us.

Chairman.

1506. May I say that amongst those gentlemen the member for Grimsby is the chief one? —I think that may be said.

Lord *Heneage*.

1507. I was just going to ask you this further question. If those gentlemen who you say are anxious to see this Bill passed, if it is necessary to pass it in the shape it now is, are willing to pass it, there is really no opposition in the trade whatever; they are absolutely unanimous?—I think so. I think you heard all the opposition so far as Grimsby is concerned—it has been frank and open; the opposition has come in full force, but of course it is a strong opposition; Grimsby is a very important place if you take it in numbers and value. When you say that it is only a small section, the opposition that was presented I think was unanimous, and it represents a very large portion of the fishing industry.

1508. But the question I asked you, and I thought you answered me, was that Grimsby would support this Bill in the shape that it may come forth from this Committee and pass the House of Lords, and do their best to get their (0.10.)

Lord *Heneage*—continued.

members to support it in the House of Commons, rather than lose any Bill at all?—I think I ought to say frankly that we shall have the greatest confidence in your Lordship's Committee and those persons who are connected with you in doing the very best they can for the fishing trade, and it will be left entirely with them. That is my opinion.

Earl of *Yarborough*

1509. You told Lord Onslow that the young fish were bred in Boston Deep's and were caught outside the 3-mile limit by trawlers?—Yes.

1510. What trawlers are those?—The Grimsby trawlers.

1511. They go there?—Yes, and in the estuary of the Humber. You see the shrimpers catch immense quantities of these small fish, and our North-Eastern Sea Fisheries Committee in passing their byelaws felt compelled to put a restriction on the capture of those small fish.

Duke of *Abercorn*.

1511A. Do you represent the same interests in Grimsby as Mr. Doughty; are you identical in your opinions?—Yes; only as a witness. I am here as a member of the North Eastern Sea Fisheries Committee.

1512. Do you take any interest in the sailing trawlers as well as the steam trawlers?—There are no sailing trawlers in Grimsby.

1513. But you know the whole country?—I know it well.

1514. All down south?—Yes.

1515. Can it be put in evidence that our chief opposition will come from them?—That is so.

1516. Owing to the fact that they are represented by a large number of members in Parliament?—Yes.

1517. I presume that these small sailing trawlers earn their living by what they catch in inland seas or off-coast seas?—No, I think generally speaking the Sea Fisheries Committees are prohibiting trawling within the 3-mile limit almost around the whole of the island.

1518. But you stated just now in your evidence that these catches are getting less with sailing trawlers as well as with the steam trawlers?—That is so.

1519. What is the quality of fish that these sailing trawlers catch outside the three-mile limit; they do not go far beyond the coast do they?—Yes, they mix with us; we are all intermixed.

1520. They go up the North Sea?—Yes, they go up the North Sea; we are all intermixed. The Lowestoft and Yarmouth vessels meet our steam trawlers, and our steam trawlers go on to their ground; there is no real line of demarcation. It is perfectly true they keep nearer their own port, but our vessels go up on the Yarmouth grounds and the Lowestoft grounds. The Lowestoft vessels, perhaps, do not go as far north into the North Sea, but we are all intermixed.

1521. But at the same time the catch is less with those sailing trawlers than it is with the steam trawlers along the British coast, owing to the diminution of flat fish?—That is so.

1502. What cause do you attribute that
L 2 diminution

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[Continued.]

Earl of Yarborough—continued.

diminution of flat fish to?—To the fact of over-fishing.

1523. Therefore the same thing which results now off our English coasts might probably eventually have the same effect in the North Sea fisheries if there is over-fishing?—That is so.

1524. Therefore, naturally you would be of opinion that any legislation on the present subject, whether it is absolutely efficient or not, is advisable, so as to make a start?—Yes.

1525. And I think the people of Grimsby fully appreciate that?—Highly.

1526. And perhaps with some alteration in the present Bill they would be very willing to offer no opposition, in fact, to support the Bill in the other House?—I think so; and with regard to a falling off, and the more or less fish, I think we have relieved the North Sea considerably with our large and improved trawlers now. I think Hull are sending the principal part of their large steam trawlers to Iceland all the year round, and we Grimsby people are sending an immense quantity of vessels there. Consequently we have lessened, so far as Hull and Grimsby are concerned, the taking out of fish from the North Sea considerably, because we find it is not sufficient to pay all the year round.

1527. Now do you know anything about the importation of undersized fish from the Continent into England?—There has not been much of that going on in Grimsby now for several years, but I think it goes direct to London.

1528. The evidence has stated that there is a considerable amount of fish of that class imported during the whole year into London?—Yes, that is so, I believe.

1529. I suppose in your opinion it would be inadvisable that that should continue?—If you prohibit the sale you accomplish the whole thing, do you not?

1530. That will be one great advantage in the Bill?—That is so.

1531. Because whatever we might do with our own people we do not like to have from foreigners this importation which we consider to be unfair to British interests generally?—The prohibition of sale of course covers the whole thing.

Chairman.

1532. I have only one or two more questions to ask you. You gave us some very remarkable figures of the falling off between 1875 and 1892 in the catch, and a corresponding increase in the

Chairman—continued.

price. Is it your opinion, if matters go on as they do now, that a similar falling off will be exhibited in the catch of the steam trawlers and a similar increase in the price of the fish caught by steam trawlers?—A similar falling off and a similar decrease in catch; it is bound to be so.

1533. That is to say the result of this will be that just as there was an increase in the fish food of the people between 1875 and 1892, so is there likely to be, as the larger area is fished out, an increase in the price of the food of the people from the fish caught by the steam trawlers?—That is so. I think that was the foundation upon which we discussed the thing very much. Are we to go in for a close season, or what is to be the result, because our fish is getting less and less. Then we discovered those other grounds and got over the difficulty somewhat.

1534. You are a member of the North-Eastern Sea Fisheries district?—Yes.

1535. You are conversant, probably, with the byelaws all round the coast of the different sea fishery committees?—Yes.

1536. Do you think it would be advantageous so far as possible to have uniformity of byelaws all round the coast?—No, I do not think it is absolutely necessary for inshore purposes, because there are certain rocky shores round our coast where you need not prohibit trawling, because you cannot trawl; consequently there is no necessity for making bye-laws.

1537. But what I mean is, do not you think that, so far as trawling is possible, it is advisable to have as far as possible uniformity of byelaws regulating the trawling within the 3-mile limit?—Yes, I think so.

1538. Therefore would you welcome the clause in the Bill which provides for the Fisheries Department having the same right to make bye-laws that is now possessed by the fishery committees?—Do you refer to inshore fishing?

1539. I do.—Then do I rightly understand that you would supersede the fishery committees?

1540. Let me read the clause to you: "For the purpose of preventing the destruction of any undersized flat fish the Board of Agriculture and Fisheries shall have the like powers as the committee of a fishery district under the Sea Fisheries Regulation Act, 1888"?—Yes, I endorse that clause. I have read it and I endorse it.

The Witness is directed to withdraw.

MR. ARNALL BRAME CAPPS, is called in; and Examined, as follows:—

Chairman.

1541. I think you are a member of the Suffolk Mutual Drift Net Fishing?—I am the secretary.

1542. And you reside at Lowestoft?—Yes.

1543. Do you come here to-day to tender evidence on behalf of the fishery industry in Lowestoft?—The longshore fishing more particularly, from Lowestoft to Aldborough.

Chairman—continued.

1544. How far out do the longshore fishermen go?—They fish in territorial waters as a rule.

1545. No further out than territorial waters?—Very seldom.

1546. How will they be affected by this Bill?—They think that the powers which are supposed to be given to make these byelaws, as you have

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[Continued.]

Chairman—continued.

have just suggested, may prove very detrimental to their interests, especially so far as shrimpers are concerned. The shrimping industry is a very important one on the east coast of England, and of course they trawl with the miniature trawl.

1547. Are the shrimpers interfered with by any of the byelaws round the coast?—We have no byelaws.

1548. I know that you have not. I say by any byelaws elsewhere round the coast?—That I cannot answer for; we have none.

1549. Do you think there is any evidence in this Bill that there is any intention whatever to interfere with shrimpers?—It looks rather dangerous. Clause 2 gives the Board power to make byelaws similar to what the fishery districts have, and you have just asked the last witness, did he not think it would be better to have a uniform set of byelaws to regulate the whole coasts.

1550. Would a byelaw which interfered with shrimpers be in any way in uniformity with the byelaws existing round the coasts of England?—I cannot say what those byelaws are.

1551. You have not made yourself conversant with them?—No.

1552. You do not know whether any fishery committee has ever made any byelaws to interfere with shrimpers?—I know that they have on the Lancashire coast.

1553. Are the shrimpers prevented from landing undersized fish there?—I believe they have restricted the mesh of their net so that it is made impossible to catch fish. The shrimpers fish with a miniature trawl with a very small mesh, and the undersized fish naturally follow the shrimps to feed on the shrimps' spawn. They congregate to a certain extent where the shrimpers are trawling for shrimps, and they must necessarily catch a certain amount of these flat fish; and if you restrict the instrument which is provided for in this clause, or the mesh of the net, by prescribing a bigger mesh, which would not stop shrimps, you would absolutely take their living away.

1554. Then really the only objection that you have to the Bill is the clause conferring upon the Board of Agriculture and Fisheries the power for making byelaws?—I object to the Bill in its entirety.

1555. Why?—Because I think, and all our people think, that the penalties would be too heavy, provided they have brought the fish ashore for their own consumption. These people are all small working men, you must understand, and at times the depression in trade makes it very hard for them to get food, and these small fish are very beneficial to their wives and families; and if they brought them ashore on a string they would be liable to a penalty of 20*l.*; if they brought them ashore in a package they would be liable only to 1*l.* You would then deprive these families of a very wholesome meal, which is very beneficial to them. From the evidence I have heard to-day I think this legislation simply emanates from the steam trawl owners, and I think they are rather selfish.

1556. One moment. Let me ask you. You have heard some of the evidence to-day, and do you think for a moment from the evidence given

Chairman—continued.

to-day that any of the provisions of the Bill are in the least intended to affect longshoremen fishermen within the 3-mile limit?—You see the various gentlemen have stated that the legislation should apply to all classes of fishermen. If you would exempt these smaller vessels, that is to say, vessels under 15 or 16 tons, from the clauses of this Bill—

1557. Would that satisfy you?—It would satisfy me so far.

1558. 15 or 16 tons, you say?—Yes, but that would not satisfy the trawling industry of Lowestoft. Lowestoft, I may say, has no steam trawlers, but they have a splendid fleet of sailing trawlers, amounting to about 320. And I have heard statements made that the sailing trawler industry is on the decline. That is absolutely wrong. There are over 20 new sailing trawlers building for the port of Lowestoft alone, which has been very prosperous during the past year and some previous years, and in fact the local builders have been so hampered by building steam drifters that they have not been able to take orders for building the sailing trawlers, and the result is that they have been all round the west coast to have these sailing trawlers built, and the sailing trawl owners are now placing orders in Lowestoft and other ports because the trawling industry has been very prosperous and the trade is increasing.

1559. What is the largest size?—About 60 tons. I think that if the steam trawlers want this legislation, the legislation should be confined to steam trawlers alone, and let the sailing trawl alone. The sailing trawlers do not want legislation, and in my mind you will have strenuous opposition in the House of Commons from the representatives of the sailing trawlers round coast.

1560. Let me ask you this question. Are you aware that the Bill proposes to proceed by Order of the Board of Agriculture and Fisheries?—Yes.

1561. Supposing that Order were confined to steam trawlers, would your objection to the Bill disappear?—Undoubtedly it would. We do not care what legislation the steam trawlers have, provided it does not touch the sailers.

1562. I do not think I need trouble you any further in that case.

Duke of Abercorn.

1563. Where do your sailing trawlers fish? In what waters do they generally fish?—They fish right from the Norfolk and Suffolk coasts, anywhere across to the other side, as far as the Dutch coast. They do not go so far to the north as the steam trawlers go. And I will tell you where legislation will come in very detrimentally to the sailing trawlers. The ground for sailing trawlers must necessarily be limited, because if certain grounds are closed at certain times of the year, the steam trawlers, being the more powerful vessel and propelled by steam, can go farther north and on different ground. That is impossible for the sailing trawlers; they must fish in a certain radius if they are to get their fish to market in good condition.

1564. Your sailing trawlers never catch any undersized fish?—Yes, I admit that they do.

1565 What

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[Continued.]

Duke of Abercorn—continued.

1565. What happens to those undersized fish?—They are not such great sinners as the steam trawlers.

1566. But they are minor sinners?—Yes, but the sailing trawlers avoid them as much as possible because they are hardly worth the trouble of catching.

1567. But they do catch a considerable amount proportionately?—They kill a certain quantity, but not so much in proportion as the steam trawlers.

1568. The object of the Bill is to prevent the destruction of those undersized flat fish?—Yes.

1569. Therefore if these sailing vessels kill a certain proportionate amount surely they ought to come within the provisions of the Bill?—All the fish that the Lowestoft trawlers catch are not very small. There are a certain number they would sort out if they went to the trawling fleet. The impression of our men is that if they threw fish over into the water again they would come there dead, and would have a tendency to pollute the water and destroy the fishing ground. I am not a practical trawler, but I have been connected with drift fishing all my life, and an experience of the pollution of grounds is that, provided a train of our nets should go to the ground with herrings, after a time the herrings will absolutely flee from that ground, and we do not get herrings on that particular spot again for some considerable time. The trawlers in our part have naturally come to the conclusion that if it is detrimental to one industry for dead fish to be on the ground it must be detrimental to the other. But I come here more for the longshore fisherman. I think if they were excluded from the Bill they could not have any objection. But no doubt if these powers were given it would practically starve these men. And you must understand that it is the interest of the Government to maintain a certain number of these longshore fishermen, because they are all Naval Reserve men. We have pretty well 1,000 men engaged in this longshore fishery in one way and another, and now in Lowestoft alone I believe we have over 600 men belonging to the Naval Reserve. A great number of those longshore fishermen belong to the Naval Reserve, and if you go to drive them into some other capacity to earn their livelihood, you will then diminish your Reserve men.

1570. And increase the supply of small fish?—That is questionable. I believe the steam trawlers have been more destructive in proportion than the sailing trawlers, and you know they destroy the big fish, and if you destroy the parents no children can be born. There is quite as much to be said against over-fishing for big fish as over-fishing for small fish, because if you destroy the parents there cannot be any children. I know it can be used in argument that if you destroy the children there cannot be any parents, but if there are no big fish, they cannot breed little ones.

1571. What do you consider the size of an undersized fish at Lowestoft?—I agree that an 8-inch fish would not be objectionable. I think

Duke of Abercorn—continued.

it would be accepted by the trade as far as selling is concerned. The clause in this Bill you see, prevents the landing: that is the drastic measure in it. If a man wishes to bring any fish home for his family, you say you will not let him, he must throw it overboard or get rid of it in some way; and I feel confident that if they throw a quantity of small fish overboard, especially on longshore grounds, it will pollute the grounds, and will not only destroy their shrimping industry, but I believe will be detrimental to the young fish themselves. You must understand that a certain number of those fish get smothered when they get down into what they call the cod-end of the net?—I have seen a quantity of small fish killed in that way.

1572. Do they destroy many undersized soles?—Not a great quantity; sometimes they scarcely see a sole, but at other times they may get about 30 or 40 or 20 or 30 soles of about 8 or 9 inches.

1573. I suppose that 15 or 20 years ago the supply of soles off Lowestoft was greater than it is now?—Yes, I admit that. Then, again, we know you cannot stop the march of progress, but I believe it is resulting from the steam trawlers. They overfish the grounds themselves, no matter whether for small or large fish; the catching power is so destructive.

Lord Northbourne.

1574. Would you kindly tell me whom you exactly represent here?—The longshore fishermen.

1575. Who are the longshore fishermen?—They extend from Lowestoft to Aldborough.

1576. How far is that?—About 40 miles.

1577. How many of them are there?—I should think there are between 500 and 600 that work those boats. They have sons and other people dependent upon them.

1578. Do the boats belong to them?—Yes, small boats.

1579. What is the size of the boats?—From about 15 to 25 feet keel; they are open boats, some lugger and some cutter rigged.

1580. What sort of tonnage are they?—They do not go by tonnage: about 8 to 10 tons.

1581. I thought you said you had some 60 tons?—Those are the big trawlers.

1582. But you do not represent those?—No, I do not represent them, but I know what the trawling industry is. They will be represented here, and they will speak for themselves.

1583. You represent what you call the longshore fishermen?—Yes.

1584. They have a long net with which they catch those shrimps?—No, it is a miniature beam trawl. I suppose the net is just about 20 feet long and about 12 or 15 feet beam.

Duke of Abercorn.

1585. What is the mesh?—It is very small; the small end of the net is not more than a quarter of an inch square.

1586. Do

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Mr. A. B. CAPPS.

[Continued.]

Lord Northbourne.

1586. Do not you think that the produce of the sea requires cultivation and regulation, just in the same way as the produce of the land requires a certain amount of administration?—Quite so; I admit that, but my opinion is that the most destructive people are the biggest people. It is all very well for them to come here and legislate; they do not care for the small man.

1587. But those big people that you say are so destructive are supported by the views of men of science who have made a great study of those things?—Yes, undoubtedly, but they are not infallible.

1588. How does that square with your idea of their opposition being a selfish opposition?—Scientific men sometimes are at fault.

1589. That no doubt is true?—I believe it is a very difficult matter. They may be as scientific as you like, to judge accurately of the habits of fish. I know they cannot judge the habits of the drift fish.

1590. We are all very ignorant, but do you think those scientific people may know a little more than others?—Perhaps they do; a man should do if his knowledge is worth anything at all.

Lord Heneage.

1591. You represent the longshore fishermen, and the longshore fishermen only pursue their trade within territorial waters?—That is true.

1592. Therefore it is only as regards the territorial waters that you are giving evidence to-day?—Quite so.

1593. Therefore so far as the Bill affects the North Sea and outside the territorial waters, we may take it that you do not profess to speak?—Of course not. I do not propose to speak for outside.

1594. The territorial waters are under the supervision of the various districts round the coast?—We have not got a district.

1595. You have no district at present?—And we do not intend to have one if we can help it.

1596. Are you aware of what the rules are in the neighbouring districts with regard to shrimpers?—No, I cannot say what they are.

1597. But have you heard that they have done the shrimpers any great harm?—I do not think there is so much shrimping by trawlers at other places along the coast as there is from Yarmouth to Southwold. I think that is the principal shrimping ground for the shrimps on the east coast. I know the shrimping at Lynn, but I believe the Lynn shrimpers are principally out of territorial waters.

1598. But if you have a District Fishery Board, and they make rules, or if in their absence the Board of Agriculture and Fisheries make the rules the same as they are in other places, would you have any right to complain, do you think?—Perhaps the rules and byelaws made in other districts might not be applicable to our district. You see one set of byelaws or rules might be very beneficial to one particular district, but might be very detrimental to another.

1599. Will you take it from me that the different fishery boards round the coast have made rules wherever they thought it necessary

Lord Heneage—continued.

to prevent the destruction of undersized fish?—Perhaps so.

1600. Are you aware that, notwithstanding those rules, in the Lancashire district 50,000*l.* worth of shrimps were landed last year?—I am not cognisant of it.

1601. But if that is the case those byelaws have not done a serious damage to the Lancashire district?—That I cannot answer for; I do not know what the state of the fishing is. If I was acquainted with the state of the fishing I could give you a direct answer, but I cannot give you an answer on an assumption.

1602. You can only speak for your own district, and you say that you want to be free whilst everybody else is under byelaws?—We like to have a free hand, it is true, and there is unanimous opposition against any legislation of that character right along the coast from Yarmouth.

1603. Then you stated that the trawling industry, in asking for this legislation, is doing so from a selfish motive?—I think so.

1604. Are you aware that there is a great diminution of fish in the North Sea and in other places?—I know we have had a very fair supply at Lowestoft.

1605. But are you aware that there has been a very great diminution of fish for a considerable number of years?—I believe there has been.

1606. Is not fish a food of the people?—Quite so,

1607. And is it not in your opinion necessary that that food should be protected against this wasteful destruction of young fish?—If you can protect one portion of the community without injuring another portion of the community I would say, do so, but I do not see why you should destroy one large portion of the community for the benefit of others. I believe in the live-and-let-live system.

1608. But how would the prohibition of the catching of small fish in the districts from which the larger fish come, or ought to come, interfere with you within territorial waters, when trawlers are not allowed to fish there, either steam or sail?—I do not think any legislation would be so injurious provided the restriction was made that fish under a certain size should not be sold. If you prohibited the sale I think there would be less objection than if you prohibited the landing.

1609. You are aware that under the Bill the Board is entitled to order the sizes which they think best?—It does not state so in the Bill.

1610. They have a full discretion under the Bill?—The Bill gives the Board absolute power to do just what they like. If you have a large and influential organisation come and approach the Department, the Board of Agriculture and Fisheries perhaps might listen more to them than to others.

1611. Are you aware that that is exactly the fear that we have on the other side?—I admit that it cuts both ways. You know money is power, and money is very powerful, and monetary influence we find is a very great factor in all legislation. Wherever the most money is, that is the most powerful factor in carrying legislation. That has been our experience.

1612. You

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Mr. A. B. CAPPS.

[Continued.]

The Earl of Yarborough.

1612. You catch in your shrimp nets a great many very small fish, do you not?—Not a great many; they catch a certain quantity.

1613. Fish of the size of my thumb?—Not so small as that; you very seldom see any so small as that; you see them about three or four inches long.

1614. What are they?—Dabs and small plaice; and at chance times you find a few young soles, but during the summer months they catch a certain quantity of small soles, or perhaps on a shrimp boat in a day you catch ten or 15 pair of these small soles, and perhaps half a basketful of small fish. I mean a small basket.

Duke of Abercorn.

1615. Are the trawlers at Lowestoft owned by companies or by private individuals?—There are no companies at all; they are all owned by private individuals. We have some companies

Duke of Abercorn—continued.

connected with the drift fishing, but there are no trawling companies in Lowestoft.

1616. Can you tell me how it is that Lowestoft is exempt from any fishery ordinance?—The inhabitants all along the coast have always opposed it, and we have recently had an inquiry. Mr. Fryer came down and held a private inquiry amongst members of the trade and also the fishermen themselves, and he found the opposition very strong, so that we thought that no recommendation would have been made; but to our surprise we had a memorandum come down from the Board of Trade in which Mr. Fryer made certain recommendations as to legislation to place us under a fishery district, which you will find will meet with most strenuous opposition.

1617. In fact, Lowestoft is in favour of free fish?—We are.

The Witness is directed to withdraw.

Ordered,—That the Committee be adjourned to To-morrow, at Eleven o'clock.

Die Veneris, 11^o Martii 1904.

PRESENT :

Marquess of ABERCORN (Duke of
ABERCORN).
Earl of ONSLOW.

Earl of YARBOROUGH.
Lord NORTHBOURNE.
Lord HENEAGE.

The RIGHT HON. THE EARL OF ONSLOW, G.C.M.G., in the Chair.

MR. EDWARD WINDEATT is called in ; and Examined as follows :—

Chairman.

1618. You are, I think, Chairman of the Devon Sea Fisheries Committee?—Yes.

1619. And you have been ever since that Committee has been formed?—Yes.

1620. You have, I presume, byelaws?—Yes; I have a copy which I can hand in, with the dates when they were confirmed (*handing in the same*). *Vide Appendix.*

1621. Have you any powers under your bye-laws to limit the size of fish that are caught?—No.

1622. Do you think it is desirable that you should have such powers?—Yes, I do.

1623. Would you prefer that those powers should be exercised by local committees or by a central authority?—By a central authority.

1624. Is there much destruction of undersized fish off the coasts of Devon and Cornwall?—I do not think there is very great destruction. I have a list of what the fishery officer took within the last fortnight. He says: "During the past ten days I have visited the following places where trawl fishing is carried on, namely, Beer, Brixham, and Plymouth. At Beer the trawlers landed small lots of plaice and dabs, and about 30 per cent. were very small. They also landed a few soles, there being no small ones among them. At Brixham the trawlers during the past fortnight have landed very good catches of plaice, and the quality has been very good on the whole, there not being more than 15 per cent. of small. The soles they have landed have been a very fair size, and the turbot and brill also. At Plymouth the trawlers have landed small catches of flat fish, but the quality has been very good, not more than 10 per cent. being small. There has not been any seining throughout the district for several weeks. With reference to the size of the different fish you mentioned, I should say for a sole not under 8 inches, a plaice not under 8 inches, a turbot (0.10)

Chairman—continued.

not under 10 inches, and a brill not under 10 inches. The size I have mentioned is from head to tail over all."

1625. What are the sizes of the largest trawlers that go out from Plymouth and Brixham. They are all sailing trawlers, I presume?—They are all sailing. We do not allow any steam trawlers within the 3-mile limit.

1626. But in the ports of Plymouth and Brixham are there any?—No, there may be one or two at Plymouth, but not more. At Brixham under 15 tons there are 253; under 35 tons, 40.

1627. What is the maximum?—I believe they go up as far as 70 tons.

1628. Where do the vessels of 70 tons go to trawl?—They trawl in the Channel, and they also have gone lately to the Bristol Channel.

1629. Do any of them go to the North Sea?—Occasionally one may, but very seldom now.

1630. Have you ever been out on a trawler yourself?—No, I have not.

1631. Do you know whether the practice or the owners of trawlers is to throw small fish overboard or to bring them in?—Very largely to throw them overboard.

1632. Do you know whether, in their opinion, the majority of those fish live, or whether they die?—They die.

1633. The majority?—Yes.

1634. The plaice?—Yes.

1635. The soles also?—Yes.

1636. Do you agree with your inspector as to the sizes of the fish?—I do.

1637. Do you think an 8-inch limit for plaice would be effectual?—I think it would.

1638. And do you think that if the fish under 8 inches were spared they would grow to be sizeable fishes?—Yes.

1639. And therefore improve the food supply?—Yes.

1640. Do you think that view is shared by the
M men

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[Continued.]

Chairman—continued.

men themselves, the owners of the trawlers?—I think it would be shared by the owners of the trawlers, but I doubt whether it would be shared by the men working the trawlers.

1641. Why?—I think they like to catch anything they can sell now.

1642. Do they share the profits?—Yes, my committee have been always unanimous in petitioning in favour of all the Bills about undersized fish.

1643. In common with all the sea fisheries committees round the coast?—Yes.

1644. We had evidence of that at the beginning of the inquiry. You have observed, probably, that the Bill proposes that there should be powers to the Board of Agriculture and Fisheries to make byelaws in the same manner as are possessed by the sea fisheries committees. Have you any views upon that point?—I am strongly in favour of that, because the sea fisheries committees consist of so many different interests that there is a good deal of dispute between them as to carrying anything of that sort.

1645. I suppose, generally speaking, you would agree that uniformity in the byelaws all round the coast is desirable?—Certainly, that is one of my points, because only recently we had byelaws with regard to lobsters and crabs, and those of the adjoining district, which is the southern, were utterly different. After some time we managed to get the southern to have the same byelaws as we had.

1646. In Scotland the byelaws round the coast are all fixed by the same authority, are they not?—Yes.

1647. Is that a desirable thing in your opinion?—I think so.

1648. Your committee have, in common with others, on more than one occasion invited the Government to form a Fishery Board for England, have they not?—Yes, we have.

1649. And that would be one of the main objects of the Bill?—Yes.

1650. Then there is a certain part of the coast of England which possesses no fishery committees at the present time?—Yes.

1651. Do you think it is desirable that the whole coast should be under regulations?—I do.

1652. And if this power were conferred upon the Board of Agriculture and Fisheries you would desire, I presume, that so far as possible it should endeavour to educate up the less advanced fisheries committees to the level of the more advanced fisheries committees?—Certainly.

1653. Is there any steam trawling at all?—Not within the 3-mile limit. I think I am right in saying that in Cornwall there are practically no by-laws inside the 3-mile limit except to keep out the steam trawlers. They have not got byelaws similar to ours, and we are adjoining them.

1654. Is it not the fact that the experiments you have made round the west and south-west coasts of England have gone to show that there are certain bays and estuaries which are the habitat of small, undersized fish?—Yes.

1655. And there are other bays and estuaries which, curiously enough, although under similar

Chairman—continued.

couditions, are not?—Yes, as the researches of members of the Marine Biological Institute at Plymouth have proved.

1656. Generally, you approve of the Bill?—I do.

Lord Northbourne.

1657. You said that a great many of these fish were thrown overboard?—Yes.

1658. We had evidence yesterday from one gentleman who said that if they were thrown overboard in large quantities they polluted the ground; what do you think of that?—I should not think so. We keep them right out of the bays, right out in the channel, out in the open sea, at a good depth.

1659. Do you think that would make any difference whatever?—No, I do not think so. I have no practical knowledge of that, of course.

1660. What area do you represent altogether?—It think it is about 126 marine miles.

1661. Where does it extend from?—The north and south coast of the whole of the county of Devon, and a small portion of the county of Cornwall—just a piece on one side of Plymouth Sound.

1662. Is there another committee for Penzance?—Yes, there is another committee for Cornwall.

1663. You do not represent the Brixham trawlers?—No. It is one of my points, that we do not get uniformity with Cornwall. We have a Cornwall representative on our committee, and our byelaws extend to a part of Cornwall; but Cornwall has another committee of its own, and it does not have any byelaws except to keep the steam trawlers right outside the 3-mile limit.

1664. Is there any opposition to this Bill on the part of what you call the longshore people?—I do not think so. The longshore fishermen, I do not think, will be injured, because I have had experience of that sort of fishery, and their fish are not dead when they bring them in, and they only throw it away. This Bill would compel all to throw them away, which they do not do at the present time, and they ought to do so.

Lord Heneage.

1665. You spoke of uniformity of practice throughout these districts. Is it not within your knowledge that some years ago there was exactly that complaint with regard to the cattle diseases provisions in various counties, and in consequence of that, a Bill was brought in in 1886 to promote uniformity, and since then there has been practically no disease whatever?—Yes.

1666. And that is owing to the uniformity throughout the whole district?—Yes, I am aware of that.

1667. And do you think if there was uniformity in the regulations of all the districts around the coasts, it would be far better than if each was left to itself, conflicting one with another?—Yes.

1668. Do you know anything about the Lancashire byelaws?—No.

1669. They have not interfered in any way with

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[Continued.]

Lord Henric continued.

with the shrimping, have they?—I do not know. I do not think there would be such a feeling against these byelaws if they were made universal throughout the whole coast, because they would feel that all were being served alike.

Duke of Abercorn.

1670. Has the plaice much vitality, do you know?—I do not think they have much vitality after they have been in the trawl.

1671. That is what I want to come to. You said that those taken on the trawlers and thrown overboard were mostly dead or would die?—Yes, and that has been proved by the evidence of members of my own committee, who gave evidence on former Bills, and before the committee on the whole question, who said that in taking them up and getting them into the pot of the trawler, they were practically dead. The argument was that there was no use throwing them overboard because they will not live.

1672. We have had evidence that they were taken on deck for a considerable time and stamped on by men with boots?—I do not think much of that. My own point with regard to this Bill is that if we take, for instance, the question of bays, the Marine Biological people say that two of our bays are good nurseries for fish, that there are a lot of small fish in them; and if there was a provision that they could not land the fish they would not go and trawl there.

1673. Do the Brixham fishermen and the other fishermen make any money at all out of these small fish, who, you say, would not approve of this Bill because they could not sell

Duke of Abercorn—continued.

them?—Yes, they make some money out of it certainly.

1674. But is it not, in your opinion, comparatively little, owing to the size of the fish?—Very little, but they do make something.

1675. What are those fish used for generally?—Some they use in their own houses, some they sell to the very poor, and some they sell for manure; but the trawlers throw most overboard that is not saleable.

Chairman.

1676. There is one other thing I omitted to ask you; that was, as to the policing of the area. Have you sufficient means at your disposal to effectually enforce your byelaws?—No, decidedly not. We have only one officer for the whole of our district, and if we were to attempt to get another officer we should be met at once with the cost to the ratepayers.

1677. Are you a magistrate or a County Councillor?—A member of the County Council appointed by the County Council on the Sea Fishery Committee.

1678. Are you aware that so far as the police are concerned there is a contribution from the Imperial Government towards the cost of maintenance of the police?—Yes.

1679. Do you think it desirable that the policing of the sea should be treated in a similar manner?—I think it should; I think it is very desirable that it should be.

(The Witness is directed to withdraw.)

MR. DANIEL MEARNES is called in; and Examined as follows:—

Chairman.

1680. You are Bailie of Aberdeen, are you not?—I was; I am ex-Lord Provost of Aberdeen.

1681. And you are largely interested, are you not, in your fishing trade?—Yes.

1682. You are yourself an owner of vessels?—Yes, I am connected with over 40.

1683. Have you been connected with the trade for many years?—Since ever it started.

1684. Have you been one of those who have constantly urged upon the Government of the day the necessity of making some provision for preventing the destruction of undersized flat fish?—Yes.

1685. We were told by the officers of the Scottish Fishery Board that there was comparatively little undersized flat fish exposed for sale in the port of Aberdeen.—There is very little under-sized flat fish sold at the port of Aberdeen. In fact, the Bill as before us at the present moment would not affect Aberdeen to the slightest extent, because we go to the Great Fisher Banks of the Orkneys and Hebrides, and it is only full-sized fish that come from those parts.

1686. You do not go to what have been known as the eastern grounds?—No; we do not go to (10.0.)

Chairman—continued.

the eastern grounds, but one or two vessels have been known to go to the eastern grounds at the time of herring fishing, and land their goods at Eymuiden; but it has not proved remunerative, and they do not go back again very often.

1687. These Great Fisher Banks are at the west of the eastern fishing grounds; are they not?—Yes.

1688. Do you think that there is any probability in the theory that the great bulk of these good-sized plaice which you catch on the Great Fisher Banks have migrated from these eastern grounds?—Yes, it is supposed that they have done so.

1689. Do you think that if ships were prevented, or if it was not worth while for the trawlers to go to the eastern grounds, a greater number of full-sized plaice would come then to these Fisher Banks where you fish?—Yes, it is supposed that they would do so.

1690. Are you aware that the Scottish Fishery Board have been making some experiments by marking fish?—Yes, I am a member of it.

1691. Are you aware that some fish marked on the eastern grounds, small fish, have been found

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Chairman—continued.

found on the Fisher Banks of good size?—That is the report of the experiments.

1692. That would be good evidence to show that the more you protect the small fish on the eastern grounds the better the chance of an increased number of full-sized fish on the Fisher Banks?—That is so. They do not come from the eastern grounds into our district; the water is too deep for them, but they migrate from their own grounds—they are supposed to do—from banks in Holland, and go to the Great Fisher Banks.

1693. Now, turning to Grimsby and Hull, the trawlers from those ports do go to the eastern grounds and do catch a large quantity of undersized fish?—Very largely.

1694. Are you acquainted with the Grimsby market?—Yes.

1695. Have you seen many undersized flat fish landed there?—Hundreds and hundreds of boxes of them, monthly and weekly.

1696. Do you agree with witnesses who have come from Hull and Aberdeen, that if a self-denying ordinance were imposed upon them that they should not go to those grounds, they would gladly accept it?—I think it would be a beneficial thing for them, and I think they have satisfied themselves that it is the only way to protect their own interests.

1697. This Bill, you are aware, deals only with flat fish, and therefore I will not trouble you for any evidence with regard to round fish, though I believe you are of opinion that round fish are also being over-caught?—Of round fish we have occasionally large shots in Aberdeen, but I am glad to say that the trawl-owners are presently engaged in considering the question of enlarging the size of the mesh of the net, so that the small haddocks which absorb the market and bring down the prices may escape.

1698. You say that the small haddocks bring down the prices. I suppose the same thing may be said of the small flat fish, that the small flat fish bring down the prices?—Yes.

1699. And at the same time do not give any material increase to the food of the people?—None whatever; the 8-inch plaice is not worth the fuel to cook it; it is only when it comes to about 10 inches that it begins to gather flesh, and from that up to about 16 or 17 inches it is fit for human food.

1700. Supposing that an Aberdeen trawler found that she had a large catch of undersized fish for which there was no market in Aberdeen—and you say there is none—would she go to a continental port to dispose of it?—I do not think so.

1701. You have never heard of that?—I have never heard of any going with flat fish; they go, as I said, for large haddocks, and take them to those ports during the time of the herring fishing.

1702. Would they go to Grimsby?—They might go to Grimsby, but we have never had any knowledge of the Aberdeen vessels going there with the undersized fish.

1703. Do the foreign vessels that fish in the Moray Firth ever land their catch in England?—Yes, in Grimsby very largely.

1704. With regard to the limit, what do you think would be a size limit for plaice which

Chairman—continued.

would make it not worth the while of Grimsby and Hull trawlers to go to the eastern grounds?—If the limit were 8 inches I do not think that any trawlers would care about going for the purpose of bringing anything into the market 10 inches of course is a limit which would enable them to bring material that would be fit for human food: but I think that the other, the 8 inches limit, would prevent their going to catch undersized fish.

1705. You think that if they were allowed to land the 10-inch plaice, they might yet find it worth their while to go to those grounds?—Yes.

1706. What size would make it absolutely unremunerative?—Ten inches.

1707. Would you be prepared to have a certain size limit in one port and another size limit in another port?—It is a difficult matter to differentiate between the places by a Bill such as is before us at the present moment. I think the Board ought to have full powers to deal with that question themselves.

1708. It is not suggested that any material quantity of small fish from the eastern grounds is brought into Lynn, into the Wash?—I do not think so.

1709. Therefore, if the Bill did not apply, or if the Order of the Board did not apply to Lynn and did apply to other ports, it would be effectual?—It would.

1710. Now, some witnesses have expressed the opinion that it would be more difficult to prevent the landing than the sale, and that a very large staff of men would have to be provided to search every vessel; what is your view as to that?—I do not think that is at all correct. The fish are all landed in boxes of about a hundredweight each, and the salesmen go over them, and the buyers will take very good care that they will not have to do with undersized fish; they would not be able to smuggle them in.

1711. The crews are shareholders to some extent in the venture?—Yes.

1712. And they would not care to be fined for smuggling?—They would not like to bring the material in if it could not be sold.

1713. All that would happen would be that they would put them overboard?—They would put them overboard; they would not catch them.

1714. So far as Scotch opinion is concerned, do you think that the Bill would cause any ill-feeling?—No. I think that the Bill would be the means of reducing any ill-feeling that there may be at the present moment, because there are certain seasons of the year when the Moray Firth is hardly worth the pains of fishing for plaice; and under those circumstances, if Scotland and England were both put in the position of not being able to sell the material that was brought in, it would be the means of reducing to a very considerable extent the friction which exists between the two classes of fishermen.

1715. I presume that you would be in favour of extending the prohibition of landing of such fish caught in the Moray Firth to England as well as Scotland?—Most distinctly. I am strongly in favour of preventing the landing of all

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Chairman—continued.

all undersized fish, whether flat fish or other. I am against closing the waters without an international convention.

1716. Then although this Bill would practically not affect Aberdeen, you, as an Aberdeen trawler, are anxious to see the measure passed, in the general interests of the fishing industry in the North Sea?—I am satisfied that it would be the means of doing a large amount of good to all classes of the trade.

1717. You believe that it would not only increase the profits in your own trade, but it would increase the food supply of the people?—Yes, it would.

1718. When I said that it does not affect Aberdeen, what I meant was that there are so few small fish landed in Aberdeen that the prohibition of landing them would practically make no difference one way or the other?—It would practically make no difference. I am glad to say that both owners and masters are exceedingly anxious that no small fish should come to market; in fact, they boycott them when they do come.

Duke of Abercorn.

1719. Do you suppose if the small fish were thrown overboard from the trawlers they would mostly live?—I have known plaice to live for ten hours after they are caught, and I am satisfied that if the trawl is hauled perhaps once in two or three hours, and the fish are selected, if they are thrown overboard at that time you will get from 75 to 80 per cent. of them to live.

1720. And you think that you would be able to persuade the trawlers to do that?—I am not sure that we would be able to prevent foreigners from doing it; but my opinion is that the markets of England and Scotland being shut to trawlers they would flood their own markets in a short time, so that the process would be thoroughly unremunerative, and it would be no use going there.

Lord Heneage.

1721. With regard to the Aberdeen trade, although you say that the prohibition would not affect them much, there is, of course, a very considerable trade, and you are all unanimous in favour of the Bill?—We are unanimous in favour of the Bill, and the next gentleman who appears from Aberdeen will be able to say that he has been sent from the Trawl Owners' Association to support it.

1722. And Aberdeen has always joined with London and the Humber ports in desiring some such legislation as that before the committee?—When we first started the fishing industry in Aberdeen we had, unfortunately, Grimsby rather against us, because when the Moray Firth was closed they were under the impression that it was the breeding ground. They have changed their minds now, of course, which I think is quite right. I have no doubt that the opposition they have to the present Bill is caused by the action of the Scottish Board in closing the waters of the Moray Firth; but public opinion has altered to such an extent since then that I

Lord Heneage—continued.

think the Grimsby people must see the great desirability there is that they should join with their friends in going on endeavouring to get this Bill passed in their own interest.

1723. I was not referring to the opinion of Grimsby, but to the opinion of Aberdeen. They have been always unanimous in their strong support of other trawlers in desiring some such legislation?—Yes.

1724. Then with regard to the other question of the sale of fish, opinion has changed very much, has it not?—Very much.

1725. Even at the end of last year there was a very strong feeling in the executive, was there not, that without the prohibition of sale, the prohibition of landing would be ineffectual?—As long as the fishing is conducted on its present lines I quite agree with the remarks that you have made; and it will be necessary, of course, if we have power to do so, to prevent the landing of large quantities of undersized fish. If that was done it would affect the trade very materially for its good. But I quite agree with the remarks you have made, that we are entirely of opinion that this Bill is in the interests of the community generally.

1726. And now that opinion has so much changed among practical men that they think the prohibition of landing will be quite sufficient without the question of sale being touched at all?—Yes, that is quite true.

1727. One of the reasons of that, as you are aware, is the experience which has been had in Belgium and Denmark, where they have found the prohibition of landing perfectly effectual, and have never put into operation the sale clauses of their Acts?—Yes, I understand that is the case.

Lord Northbourne.

1728. Do you know Mr. Charles Hellyer, who gave evidence yesterday?—Yes.

1729. Have you read his evidence?—No.

1730. Did you hear it?—I heard part of it.

1731. I am afraid he made some observations which were not altogether complimentary to the part of the world to which you belong. Did you hear those in which he said "We have suffered, of course, up to now from too much Scotch legislation. The whole of the fishery legislation of this country has been dominated by Scotland"?—I am quite prepared to say that Hull and Grimsby too are labouring under the impression that the Scotch Acts have been the means of preventing a large portion of ground from being fished which they would have had the benefit of.

1732. He also said that the chief opposition to this Bill came from Scotland; do you endorse that?—Yes, I say it is perfectly correct, that they are under the impression that they will be used by the department in the same way as Scotland was used by their department; but I have endeavoured to show, both to him and a good many of his friends, that opinion has changed very much since then. I believe that if another measure was going to be brought forward for Scotland at the present moment, it would be a difficult thing to close any waters without an international agreement.

1733. Unless

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Lord Heneage.

1733. Unless it was extended to foreign vessels as well as English?—Yes.

Lord Northbourne.

1734. But he also said that there were a large number of small and unimportant fishing industries which would oppose this Bill rather strongly?—I understood that what he meant by that was that there are a large number of small constituencies on the Moray Firth, each of which has representatives in Parliament, and their constituents have to be attended to; and consequently there are about 22 members of Parliament in the small constituencies against two or three in the large constituencies, and that Aberdeen would stand a very bad chance as against them.

1735. How could that opposition be overcome?—That opposition could be overcome by the prevention of landing all small fish, and from all classes of boats.

1736. But that is what they will oppose?—I do not think so. I think they would be pleased to see the prevention of landing undersized fish

Lord Northbourne—continued.

at all. They like prohibitive measures; and they have that in the Moray Firth.

Chairman.

1737. There is no power in this Bill for the Board of Agriculture and Fisheries to close any part of the seas, is there?—I do not think so.

1738. Except indirectly, in that it may not be worth while, if certain small fish cannot be landed, for the trawlers to go there?—No, it would not be.

1739. Now, as a matter of fact, or rather I should say, as a matter of suspicion, is it not the case that the Scotch trawlers believe that the Moray Firth has been closed to them by the Scottish Fishery Board in the interests of line fishermen?—Yes, it is quite true.

1740. Is there any analogy really between the closing of the Moray Firth in the interests of line fishermen and the preventing of the landing of undersized fish from vessels?—None whatever.

The Witness is directed to withdraw

MR. JOHN HANNEL IRVIN is called in; and Examined as follows:—

Chairman.

1741. You are a member of the firm of Richard Irvin and Sons, steam trawl owners in North Shields, Aberdeen, Great Yarmouth, Scarborough, Grimsby, Milford Haven, and also at Cape Town?—Yes, that is so.

1742. Therefore you have a large interest in the trawling industry?—Yes.

1743. Have you considered this Bill which is before the Committee?—I have.

1744. Do you approve of it?—I do. I would have preferred a limitation to the powers of the Department. I think it would have been better to have made a maximum limit below which they might prohibit the landing of fish; otherwise I think it is a splendid measure, and will do good to the industry.

1745. What would be your object in limiting the size and having a maximum?—I think that it will take a number of years to find out what will be effectual, and if we started with 8 inches we should take a few years to get up to the size of 10 or 11 inches, and by that time the trade will have had an opportunity of considering the matter more, and perhaps giving another vote on it.

1746. What is your idea of a maximum for plaice?—Ten or eleven inches.

1747. But, supposing it was seen that the result of a 10 or 11 inch maximum was not to protect altogether these undersized fish, and that the general result was that the whole of the fish in the North Sea decreased in size, would you then not be disposed to put on a higher limit?—Yes, if we had some experience; but I am afraid that it will take a number of years to get that experience. I think we will need to try a smaller limit first.

Chairman—continued.

1748. It would be necessary to go to Parliament to increase the maximum under your proposal, would it not?—I think that before we have the knowledge—

1749. Would you just answer that question first? Would it not be necessary to go to Parliament to obtain an increase over the maximum, if a maximum was fixed in the Bill?—Yes.

1750. Do you know how many years it has taken to get a Bill through Parliament?—Yes, I do; I know the difficulty, certainly.

1751. You do not think that a Government department, which is, of course, amenable to Parliamentary influences, can be trusted to fix a limit from time to time in accordance with the experience which may be gained?—Well, I think that we should certainly have trust in the Department who have supervision over an industry of this kind; but my idea was that a limit of 11 inches would give them a great scope, and I preferred it that way.

1752. What is the danger that you foresee in giving them power to go up to 13 inches?—Certainly a plaice of 11 inches is a good saleable plaice—a good marketable plaice.

1753. But what is the danger?—The danger is that the Department might go too high, and cut out marketable fish.

1754. You are able to speak on behalf of the members of all the fishing industry in the ports with which you are connected?—I have been deputed to speak for them all at Aberdeen, and I am in close touch with members of the trade at North Shields; but I cannot speak for the members at the ports of Yarmouth and Milford Haven. I can only speak for myself on those

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[Continued.]

Chairman—continued.

those ports, not being in close touch with them.

1755. But you believe that in those ports for which you do speak there is a general desire that a Government department should be entrusted with the power of preventing the landing of undersized fish?—I do.

1756. Have you any opinion as to the vitality of a plaice after he has been caught, what prospect there would be of his swimming if he were thrown back after being brought up by the trawl?—I have seen a living plaice in Aberdeen market which had been out of the sea a matter of eight or nine hours.

1757. Which had been caught in a trawl?—Which had been caught in a trawl. I may say that I asked the master of a vessel last week, who landed a shot of 80 or 90 boxes of plaice, if he found any dead plaice in the trawl, and he said no, not one; he had some difficulty in keeping them in the baskets, in getting them below, they were so lively.

1758. And you believe if these small, undersized fish were not allowed to be landed, a good many of those plaice would survive to be good-sized fish?—Yes.

1759. And if it were shown that Parliament was anxious to help the fishing industry to preserve these undersized fish, the owners would themselves give instructions to their men if they took any of these fish, to throw them overboard as quickly as possible?—Yes, I think they would. I know in Aberdeen the owners and the men themselves are against the catching of these small fish, and I think if the sale or the landing of them were prevented that would effect the object.

1760. If they knew that they could not land them, they would help to attain the object of the Bill, which is to save these plaice altogether?—Yes.

Duke of Abercorn.

1761. In fact it would be to their own interests, would it not?—Yes.

1762. Because they would have an opportunity of recatching them in a year or two afterwards when they were a larger size?—Yes. A box of small plaice is only worth 6s. or 7s., and if they were allowed to grow the same fish in a matter of a couple of years would be worth 6l or 7l.

1763. Then so far as your knowledge goes, you think that those ports that you represent are entirely in favour of this Bill?—Yes.

1764. And would they approve of a fixed limit in preference to what is now in the Bill?—No, I certainly do not think it would be advisable to have a fixed limit. Of course a maximum limit I take to be different.

Earl of Yarborough.

1765. Are you aware that the Board of Agriculture has power to prevent the spread of infectious disease among cattle?—Yes.

1766. And has had for some years?—Yes, I am aware of that.

1767. And that though it was looked upon with some suspicion at first, it has long been very well received by agriculturists?—I believe it is so. I am not in very close touch with them.

Earl of Yarborough—continued.

1768. They have complete confidence in the Board, have they not?—Yes.

1769. And therefore you believe that the Board of Agriculture and Fisheries would receive the confidence of the fishing trade in regard to any orders they would make?—Yes, I think they would.

Lord Heneage.

1770. If you put a maximum in this Bill, would it not put the Bill in the same category as the Bills of 1900 and previous Bills which we have failed to pass; would not the same difficulty arise in consequence?—I see the difficulty, but I do not think there is the same difficulty; because I think there is a difference in fixing a limit of say 8 inches if you give the Board power to go up to a maximum of 11 inches. My point is that we would experiment in the meantime and make the 8 inches to start with. To get up to 9, 10 and 11 inches I think would take so long that the powers given would be sufficient.

1771. What is the limit you want to put in the Bill?—I should say a maximum limit of 11 inches.

1772. Not exceeding 11 inches?—Not exceeding 11 inches. I do not think they should go to 11 inches.

1773. But that is what you want to put in the Bill, "not exceeding 11 inches"?—Yes.

1774. Would not that be practically, then, the same Bill as the Bill of 1900 which we failed to pass, would not the same objections arise?—Well, of course I know the objections. Yes, I think that is so.

1775. I will put it to you in this way. Are you not aware that this Bill has been drafted in this form to try and avoid the pitfalls of previous Bills?—Yes, but I think this Bill has a better chance, because from the experience of the trade since the last Bill was put forward they are more in favour of the Bill than they were then.

1776. I am not referring to the trade. I think I know their opinions pretty well for the last 20 years; but I am referring to the opposition in the House of Commons. The opposition in the House of Commons was chiefly based on the limits of the sizes in the Bill; and would not the same opposition arise now if you tried to put them into an enabling Bill?—Yes, I think it would.

1777. Then is it not desirable to avoid that opposition by giving a free hand to the Department and putting our confidence in them?—I do not know; I am not aware quite that the limit was really the wrecking of the Bill of 1900. I do not know if there is anything in the Bill, or nothing in the Bill at all, that that would make any difference. I may be wrong, but I do not think that is quite the point that wrecked the 1900 Bill.

1778. I have been connected with fishery legislation for the last 18 years, and I venture to put it before you that this is a question that would raise the greatest difficulty with regard to the Bill. Under those circumstances would you like to jeopardise the Bill?—Not at all. I made it clear, I think, that I am in favour of the Bill; but personally I prefer that limit in the Bill.

1779. But

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[Continued.]

Lord Heneage—continued.

1779. But you are willing to take it without?—Certainly; I thought I had made that quite clear to begin with.

Lord Northbourne.

1780. Do you reside in North Shields?—At Aberdeen,—I have been there a matter of 10 years.

1781. But you are familiar with the fishing industry of North Shields from the Tyne?—Yes.

1782. What number of steam trawlers now go out from the Tyne?—I am not quite sure upon that point; I should think between 100 and 150.

1783. And how many trawlers have you in your company?—We are divided between North Shields and Aberdeen. We have over 60 trawlers under our management.

1784. Altogether?—Yes.

1785. Is there any difference of opinion on the Tyne, do you think?—No, they are of the same opinion, that the Bill should be passed.

1786. What is the opinion in a place like Cullercoats or Tynemouth?—I am speaking for the trawling industry. Of course with regard to the small line fishers of Cullercoats and round about there, I cannot quite give you their views, because it is a few years since I was there; but I do not think they can be landing any of these small plaice.

1787. I suppose the coast immediately off that

Earl of Yarborough—continued.

portion of the North Sea is very rocky?—Yes.

1788. You would not find the small plaice there, as you get them further east?—That is so.

Chairman.

1789. Would you say that it is not absolutely necessary to save the life of every undersized fish all round our coast, but that if we can save the lives of a very great majority a great deal of good would be done?—Yes, a great deal.

1790. What would you say would be the weight of an 11-inch plaice? How much food would there be on it?—I could not answer that question. I have not gone into that.

1791. Nor of the 8-inch?—I saw statistics, I think, in the last Bill. I was reading through the evidence on the last Bill; that is all I can say. I have not weighed the fish myself. I think before the last Committee the weights were put forward.

1792. Does that fairly represent the size of a 10-inch fish with the head and tail cut off (*showing a paper to the witness*)?—It is very difficult to judge from sight without the head and tail.

The Witness is directed to withdraw.

MR. MORGAN TUTTON is called in; and Examined as follows:—

Chairman.

1793. You are chairman of the local committee of the Glamorganshire Sea Fisheries district?—Yes.

1794. And as regards the area which your operations extend over, perhaps you will just describe it briefly?—From Nash Point to Worms Head (*pointing out the same on a map*).

1795. Is that the mouth of the Severn?—Up the British Channel to Nash Point, from there to Worms Head—a distance of about 40 miles.

1796. I suppose no steam trawling is permitted?—Not within our area.

1797. Is any trawling of any kind permitted?—Sailing trawling.

1798. And in addition to sailing trawling there are fixed nets?—Yes.

1799. Do they catch undersized fish?—They do.

1800. In large quantities?—Yes, in considerable quantities.

1801. Is there a ready market found for them?—They are both sold in the district and sent away.

1802. Have you any power to prevent the landing or sale of undersized fish?—None whatever.

1803. Would you desire to be possessed of such power?—Yes, it is very desirable.

1804. Do you think the owners of these fixed nets would submit to such a restriction?—They are coming more into reason on the point as

Chairman—continued.

years have gone along. The fishing representatives themselves upon the Committee have also come to see that it is in the interests of fishing generally. I think we should have no difficulty in convincing them anyhow.

1805. Therefore, if under this Bill now the Board of Agriculture and Fisheries were to take steps in the first instance to prevent the big steam trawlers from catching fish in the eastern grounds, and afterwards those round the coast of Glamorgan were to come to the Board and ask to have the same provisions extended to them, it might be possible the Board would accede to their request?—I think so.

1806. And do you think that is a probable contingency?—Yes.

1807. You do not think it would be possible by any regulation of the mesh of the nets, to prevent the catching of these undersized fish?—No.

1808. Too many round fish would escape?—Yes.

1809. Now, when these flat fish are taken in the stake nets in the weir how are they landed?—They are landed in baskets, and sometimes in carts when the tide allows, and taken ashore. The provision for the small fish there is in a cage at the end of the stake net, and there is a depth of 12 inches supposed to be kept within three-fourths of the cage itself; but it is practically

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[Continued.]

Chairman—continued.

practically impossible to maintain a uniform depth on account of the wash.

1810. Are they alive when they are landed?—They would be alive when they are landed there.

1811. Would it be possible for your officer to require that undersized fish should be thrown back?—We have no power at present.

1812. I mean would it be physically possible? Supposing your bailiff was there could he say, "You are not allowed to land fish under a certain size; you must throw them back"?—He has no such power at present.

1813. But would it be physically possible?—Scarcely that; and that is the reason we think the mere term "landing" would not meet all our difficulties. The landing might be effected without detection. After that there comes the exposure for sale and the sale of the fish.

1814. What do you propose?—That there should be something inserted in the Bill to prevent the fish being taken from stake nets in that respect.

1815. You cannot help the fish being taken in the stake net?—No, they practically land themselves; they are left ashore when the water recedes and the tides go out; they are practically landed, and a difficulty might arise as to the term landing and we should have no power.

Duke of Abercorn.

1816. They are within the nets?—Yes, within the scope of the net.

Chairman.

1817. How can you prevent their being caught?—By some such term as "having in possession," or, "exposing for sale."

1818. Has your Committee memorialised the Government on this subject?—Yes.

1819. Can you hand in a copy of that memorial?—Yes (*handing in the same*).

1820. When was that memorial presented?—About ten years ago.

1821. And so far as you are aware are they of the same opinion still?—Yes, quite. I was Chairman of the Committee at that time, and have continued ever since, so I quite know that it is of the same opinion.

1822. Then if you will give us a copy of that memorial we will put it in the appendix.—If you please.

Duke of Abercorn.

1823. When you mention that these flat fish are caught in the stake nets and then landed and sent away for sale, where do they go to for sale?—Either into the town or they are sent up into the inland districts.

1824. Then is it possible to sell the small flat fish such as you mentioned?—They get what they can for them; but at the same time it is not a proper satisfying food for the people up in the manufacturing and works districts in the outlying parts of Swansea.

1825. It must be very often more bone than flesh?—Yes.

(0.10.)

Duke of Abercorn—continued.

1826. Then would your stake owners, supposing they had restrictions with regard to the sale of these flat fish, object to that; or do you think, when they found it was really for their benefit that these small fish should not be destroyed, that they would willingly give their adhesion to the Bill?—The fact of their knowing that it was the uniform practice of the whole trade all alike all round the coast would reconcile them to any reasonable legislation.

1827. The English are law-abiding people, and if they found they had one uniform law all round the coast they would submit to it in your opinion?—Yes.

Chairman.

1828. I did not ask you whether you were in favour of the clause in the Bill giving power to the Board of Agriculture and Fisheries to enact byelaws round the coast similar to the power now possessed by the fisheries committees?—I think it would have a good effect; it would bring the different committees more in touch with one another. And it also raises the question which at present exists of overlapping, and each area almost being a law to itself. I mean undersized fish may be caught in one area and taken over the boundary into another.

1829. You might gradually, through the operation of that clause, attain the ideal often put before the Government by the fisheries committees, of having uniform fishery regulations round the coast of England, in the same way as they are round the coast of Scotland?—I think it would be very desirable.

Lord Henage.

1830. You do not ask that the actual sale should be prohibited; what you want is that the prohibition of landing should be more clearly defined, so as to make it more effectual in your opinion than you think it is now. That is your point, is it not?—We have not fixed upon any words to meet the question, but what we do want to have is, that not only the fact of landing is prohibited, but that if the detection of the fact of landing undersized fish is evaded, there might be some other means of spotting the fish wherever it might be found; so that, whether it is the person exposing it for sale or the person who has taken it from the landing to the salesman, wherever the fish is found it could be spotted and dealt with.

1831. And the person punished?

Chairman.

1832. I will not ask you to give the figures now, but could you furnish the Committee with the quantity of fish taken annually by these fixed nets? Have you any records?—It would be difficult. We have no record of it kept, because they are private owners, who send the fish right away into the town and to the different dealers.

1833. Can you tell us what number of fixed nets there are. You know that probably?—Probably about two dozen.

1834. Is there anything further you wish to say?—I have not said anything as to the deep sea

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[Continued.]

Chairman—continued.

sea fishing steam trawler. We are opening out a very large industry, you know.

1835. Are there any steam trawlers sailing from your district?—Yes.

1836. From Bristol?—From Swansea. We have at present about 14 large sea-going steam trawlers, in addition to the liners and the sailing skiffs. They bring a very large quantity of fish into Swansea, the quantity last year being between 3,000 and 3,500 tons.

1837. Was much of it undersized fish?—A good deal of it undersized.

1838. And where do they fish?—Right away, wherever they can catch them, down to the Bay of Biscay.

1839. And east?—Not so much east; they leave that to the east coast men themselves. We are now providing accommodation at Swansea for one fleet of 22 deep sea trawlers, and we have no doubt at all that many others will follow.

1840. Do you know at all what the views of these trawler-owners are with respect to the limit of size?—I have not any personal knowledge of their views, but inasmuch as the dealers in the town are also the dealers from the stake nets, the position would be the same in regard to whatever the source of supply would be.

1841. But they would be hit by the prohibition of sale; but the dealers in the town would not be hit by a prohibition of landing?—That is so, but the trawlers themselves would be met by the same law in all our ports round all the coast, and although they would probably not say that they liked it very much, first of all, I think the whole tendency of opinion is to an enlightened view on the question of undersized fish.

1842. Is it a season trade, the undersized fish?—The fish are coming all the year round.

1843. But do they bring in undersized flat fish at particular times of the year in greater quantities than at other times?—I could not say that they do. I could not give you reliable information as to that.

Chairman—continued.

1844. Would there be any means of furnishing the committee with any statistics as to the proportion borne by the undersized fish landed in Swansea to the total catch?—I could get you very likely a reliable opinion and I could get the total quantities landed. I have given the total quantities landed last year from the deep sea trawlers. I think as a matter of fact the exact quantity was 3,138 tons, and we expect within a very short period to have the quantity raised up to between 8,000 and 10,000 tons in a year.

1845. We have had it in evidence here that the total catch brought into Billingsgate was in certain months of the year somewhat like as 50 is to 70; I mean that out of 70, 50 would be small plaice?—I was not aware of that.

1846. Any information of that kind we shall be glad to receive?—If you please.

Duke of Abercorn.

1847. What class of fish do your trawlers catch?—We get round fish of all sorts, and we get considerable quantities of flat fish.

1848. Plaice?—Yes, plaice, soles, turbot, and brill. We are exceptionally well situated so far as distribution is concerned, and therefore we look to a very largely increased trade there from the fishing industry. We have the Midland Railway, the London and North Western Railway, the Great Western Railway, and two other local railways leading up into very thickly populated parts of the country.

1849. I suppose some of your grounds might be termed new grounds at the present time, because owing to the increase in trawlers you are able to go into deeper waters?—Yes; that is to say, they follow the fish practically; wherever the fish are to be found they follow them and bring in large catches.

1850. Are the crew sharers in the profits?—I think that is the position they go on, to some extent.

The Witness is directed to withdraw.

Mr. WILLIAM HENRY PIBEL is called in; and Examined as follows:—

Chairman.

1851. You, I think, have been engaged in the wholesale fish business for many years in London, in Billingsgate?—Yes.

1852. Have you also branches and agents in most of the ports of England?—In every port where there is any quantity of fish.

1853. And in some Continental ports?—Yes.

1854. Have you also retail businesses?—Yes.

1855. Are you concerned in the administration of any steam trawler companies?—Not at the present time. I have been.

1856. Have you looked at this Bill?—Yes.

Chairman—continued.

1857. Are you disposed to consider that if passed into an Act it would be an advantage to your trade?—I am.

1858. Do you think that there is any fear, as has been expressed by some witnesses, that the Board might make regulations which would press hardly upon some branches of the trade?—I do not think there is any fear of that. The great thing that frightens everybody in the trade is the action of the Scotch Fishery Board with regard to the Moray Firth, but this is a new Board, and it is constituted under the Board of Agriculture. We have seen what the Board of Agriculture has done, and I think we have no fear of anything of the sort. At the same time
it

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[Continued.]

Chairman—continued.

it is quite natural for us to expect that the trade should be consulted before they went to any extremes.

1859. Does the Bill give any power to the Board to make regulations for closing any areas outside the territorial limits?—No.

1860. The Scotch Fishery Board has such power?—Yes.

1861. And therefore it would be impossible, would it not, under this Bill, for the Board of Agriculture and Fisheries to close a large area such as the Moray Firth?—That is so.

1862. Therefore I may perhaps venture to ask whether these fears are not somewhat groundless?—They are not altogether on that account. What we are afraid of is that the Board may be led away by the biological evidence to do something that may not perhaps be altogether practical. We are afraid they may raise the limit to such an extent that it will enable the foreigner to catch fish, good saleable fish, that we could not take. But still I have not any fear; I am only saying that that is the fear that other people have.

1863. But the Board is a Government Department and is amenable to the influence of Parliament?—Yes.

1864. And from the experience of the past perhaps you would agree that the whole of the agricultural community, who also are subjected to perhaps somewhat similar restrictions at the hands of the Board, are of opinion that those restrictions have been wisely exercised and have resulted in general benefit to the whole of the trade of agriculture?—That is so.

1865. Now I think you said that you had agents in French and Belgian ports?—Yes.

1866. And you said just now that there was a fear lest regulations made by the Board might give advantages to foreigners over our own subjects?—Yes.

1867. Under the Bill there would be power, would there not, to prevent the landing of undersized fish from vessels of every sort, size, and shape sailing under a foreign flag?—Yes.

1868. And you would desire to see those orders carried into effect?—I should.

1869. Do you think if the result of the limit of size were to prevent the British ships from going to fish in the eastern grounds, there would still be great fishing in those grounds by foreign vessels?—Not if the size was small enough. If our size was over 8 inches it seems to me that our vessels not going there would increase the size of the fish, and it would enable the foreigners to go there; because though there is practically no sale (that is in the German markets, principally—in the German and Dutch, but principally in the German) for any plaice less than 8 inches, there is a very large sale for plaice that would be 9 and 10 inches, and very cheap railway rates indeed.

1870. But you would hope that the result of restrictive legislation in England might be to lead foreign countries to pass legislation imposing greater restrictions even than those that are now imposed in foreign countries?—I am quite satisfied of it in my own mind.

(0.10.)

Chairman—continued.

1871. With regard to the catch and the proportion of good fish to small, we were told that in former days the sailing trawlers caught about 160 tons a year. Would you say that that was about right?—I never calculated out the weight. I could not be sure about it.

1872. But at any rate would you say that taking the increased catching power of the steam trawler, the steam trawler catches as much in proportion as the old sailer used to do?—Undoubtedly not.

1873. Therefore the quantity of fish must have been diminished?—There is no question of it.

1874. But the fishing power has very greatly increased?—Yes, greatly.

1875. And you think that if the trawlers could be prevented from taking the fish on the nursery grounds, the supply would very rapidly increase all over the North Sea?—Yes. I could give you an instance of that if you liked.

1876. If you please.—For many years, when there were sailing trawlers, it paid them to go into all the little holes and banks to take the soles; but when the sailing trawlers became superseded by steam trawlers, it did not pay the steam trawlers to go to these small holes; consequently the sailing vessels became very much less in number. While the sailing trawlers were there they fished out the soles until they became very short and very dear; and when the sailing trawlers became less in number the soles were left alone, and we have had an increase these last three or four years now in the supply of soles; and the same thing would follow with the plaice, and much more so, because the plaice reproduces so much more quickly than the sole.

1877. It has been suggested as an alternative that we should endeavour to get an international agreement to prevent those vessels from fishing in those waters; no doubt you think it impossible to obtain that?—It is impossible. There is only one way you can regulate it, and that is in the question of size. You could not police such areas; it would be impossible.

1878. And the cost would be too great?—Yes.

1879. Now, with regard to the value of these undersized fish to the retail fish trade in London, would the stopping of the landing of these fish have any influence in decreasing the supply of food to the poorer classes?—I am sure it would not. The greater part of these small plaice are thrown away, it being impossible to consume them in any way or shape or form. Even the fried fish vendors, who can use the smallest fish, say that they cannot fry the greater portion of these small plaice. If the trawlers were prevented from going on those grounds they would have to go somewhere else, and they certainly would catch quite as great a weight of fish, probably, of other sorts, that would be of much more use to the general public.

1880. Do you think that the byelaws prohibiting fishing within the territorial waters are enforced as strictly as they might be?—I think they try to enforce them, but they could be enforced more strongly

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1881. Their

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[Continued.]

Chairman—continued.

1881. Their poverty, not their will, consents?—That is so.

1882. Then would you be in favour of some assistance being given to the fishery committees to improve the policing of their own areas?—Certainly.

1883. Now, it has been suggested that it would be quite sufficient if the orders of the Board were to extend not to the whole year but to a part of the year; what is your view with regard to that?—I should prefer the whole year, but at the same time I think the months which have been mentioned by many would certainly do away with a great deal of the waste.

1884. In view of the fact that this is an enabling Bill and that it is possible for the Board of Agriculture and Fisheries to proceed experimentally, do you think it would be safe to begin by trying to restrict within certain months only?—I think so.

1885. And if that were not successful it would be very easy with a stroke of the pen for the Board to extend it to the whole year?—Yes.

1886. Do you think also in the same way it would be possible for the Board to begin with certain classes of vessels and, if that were found insufficient, to extend it to other classes of vessels?—There would be much more difficulty about that. You see a steam trawler is a large boat and has a large trawl; but the sailing boats now from Lowestoft and from Brixham and from Ramsgate are also fair-sized boats, and they have nearly the same length of trawl, and in some weathers they can catch as much or almost as much fish as the steam trawler if the weather is suitable; and there is nothing, if you prevent the steam trawler from fishing on these grounds, to prevent the sailing vessels from going there and filling up a cargo. But I think, if I may be allowed to suggest, that if it was limited to vessels, say, from 10 to 15 tons, that might be sufficient, but that there should be very strict byelaws in regard to these vessels to prevent their being used in any way as carriers.

1887. Then you do not think it would be possible to proceed by a regulation of those vessels that go to the eastern grounds and to extend the regulation to any other vessels, if it were found that they were going to the eastern grounds, by reason of their having been deserted by the larger vessels?—Yes, I think it would.

1888. Anyhow, you would rather see the Bill as it stands than run the risk of losing it by putting in any provisions that might arouse hostility?—I am sure if we do not have a Bill of some sort the fishing industry will be more or less ruined; and I should be glad to take anything that would prevent this waste of fish.

1889. As to the size limit, do you desire to tie the hands of the Department in any way?—No, I do not.

1890. You would allow them to fix it as experience may dictate from time to time?—Yes. I am satisfied that they would always consult the trade, and they have always the National Sea Fisheries Association to go to.

Duke of Abercorn.

1891. You mentioned just now that during the last three years soles have increased in number?—Yes.

1892. Have they increased in price also?—No, rather decreased.

1893. And these soles, as you say, come from holes, so to speak, along the coast of the British islands chiefly?—Yes, you find soles in a sort of wells, you may call them, in the banks, where it is a little deeper more especially.

1894. And these soles are fished by trawlers, I suppose, of from 10 to 15 tons?—No, principally from sailing trawlers of from 30 to 50 tons.

1895. Then if they came outside the operation of the Bill, would they in time destroy all this product of soles, do you suppose?—In time they would make a great difference to them; but there are not so many sailing trawlers as there are steam trawlers, and the steam trawlers catch soles, too.

1896. You mentioned about the cheapness of railway rates in Germany. Have you any complaint to make of railway rates in this country?—Yes, I have very great complaints.

1897. I know that is a general complaint, and I suppose these high rates interfere very much with the fishing industry?—Very much indeed; many of the cheaper sorts. I have endeavoured and have made it one of my businesses to introduce cheap fish, fish that people do not eat, to bring in a fresh sort for their food. Many years ago, when I was a young man, I practically made the ray trade; after that I took up a fish called monks, and lately I have taken up dogfish, and now they are eaten in considerable quantities, and very nice they are. That has been very much interfered with in the first instance by railway rates.

Chairman.

1898. The rate was so high that it would not pay to bring up the cheap fish?—That is so. We pay, generally speaking, from 2*l* to 3*l* per ton, and then we do not pay only 2*l* to 3*l* per ton for the fish, but you have to put on half as much again for the box and the ice. If we have a box with a hundred-weight of fish in it we nearly always have to pay for 1½ cwt.

Duke of Abercorn.

1899. How do you make dogfish acceptable to the British public in the shape of food?—They do not know when they buy them or eat them. The fishermen on the coast skin them and pack them in boxes and send them to London, and they are sold as fried fish always; and I can assure you if you tasted it you would say it was very good fish.

Lord Northbourne.

1900. What are they sold as?—They are sold as fried fish.

Chairman.

1901. And sometime as eel pie?—I do not think that; but it is possible; there is no telling what they can do.

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Mr. W. H. PIBEL.

[Continued.]

Duke of Abercorn.

1902. As we are on the subject of dogfish, do they destroy the nets much?—Yes, very much. That was one of my objects in creating a trade for them—they do so much destruction to the nets, not of the trawling vessels but of the vessels that go drift fishing for the herring and mackerel, and they also eat a great quantity of fish.

1903. They are a perfect pest on the west coast, both of this country and of Ireland?—Yes.

Lord Northbourne.

1904. They are a kind of shark, are they not?—Yes.

Earl of Yarborough.

1905. A great many small fish are thrown away at Billingsgate?—Yes.

1906. For manure?—At times it is impossible to sell small fish, when we get too much of it.

1907. What time of the year is that?—That is generally speaking in the spring and summer time.

Lord Heneage.

1908. In answer to the Chairman you said something about the fear of the trade with regard to Orders being made. That was not with regard to closing any particular waters, but with regard to the pressure that might be put on by the representatives of a port where the sailing vessels issue forth to make regulations in their favour as against the steam trawling interest?—That is the fear.

1909. I am not saying whether it is reasonable or not. As regards the sale of small fish, you know a great deal about the sale of fish abroad?—Yes.

1910. Do you believe there is a good market for small fish in other countries?—For small round fish there is very little indeed, and for small flat fish, for plaice, there is practically no market under 8 inches, but over that there is a market.

1911. Are there regulations in Germany and other countries against the sale of these small fish?—Yes, you cannot sell them in Germany or in France practically under 6 inches; but that is a very small measurement, and in France unfortunately at the present time the law is not well enforced.

1912. Now, with regard to the sale of small fish in England, a certain amount of this undersized fish there is a market for, is there not?—Yes.

1913. And then after that there is a second market for it for manure?—The price for manure you can hardly call a market—it does fetch something.

1914. The remainder of that is sold?—Yes, it fetches something.

1915. That is what would be stopped by the Bill in both cases?—Yes.

1916. You represent the unanimous opinion of the trade, I think, on this Bill, do you not?—I am quite sure I represent 99 per cent. of the whole retail trade of England, which has quite

Lord Heneage—continued.

as much capital in it as any other branch of the industry, and also the other great branch who practically find the capital to carry on the trade in London and other towns, that is, the merchants who buy on the coast from the steam trawlers and sell it in the various towns.

1917. I will ask you another question as to your opinion. Are you not of opinion that if there had never been the Moray Firth heard of there never would have been any fears with regard to the Bill at all?—I am quite sure of that.

Lord Northbourne.

1918. Are there a large quantity of these undersized fish coming to Billingsgate?—Yes, enormous.

1919. Where are they distributed?—They are sold principally by auction in the market, and then all the small fishmongers come and buy them, and take them home to their shops, and use as much as they can, and the others go in what we call the gut tub.

1920. What size fish—smaller than 8 inches?—Yes, the fried fish shops can use some a little smaller than 8 inches, but not many. I do not know whether you have ever seen them; they fry them up and smother them in batter.

1921. You see them in the windows sometimes?—Yes, a very little plaice looks quite twice the size when it is fried, because of all the batter; it is really pretty well all batter they get.

1922. Then the things which they have as fried fish are very often nothing but batter?—Practically there is very often little more when fish is dear.

1923. And among the poorer classes it is considered an article of food?—Yes, it is a great thing for the poorer people—fried fish.

1924. You sell these small fish by the hundredweight, I suppose?—No, all by the pound.

1925. What are they sold at by the pound?—The smallest-sized sole we sell, we sell wholesale from 3d. to 6d.

Chairman.

1926. Is that under the 10-inch limit?—Yes, most of them would be under the 10-inch limit. We import great quantities of small soles from France, but they are soles of from 10 to 12 inches.

Duke of Abercorn.

1927. Do you get a ready market for those very small soles?—Yes, Jews buy them principally—the poorer Jews.

Lord Northbourne.

1928. Does the greater part of the supply of Billingsgate come from Grimsby?—No, that is only one port.

1929. Where does the bulk of the cheap fish come from?—I have businesses in Wick and in Scrabster.

1930. Where is that?—They are both in the north of Scotland; at North Shields and Grimsby and Hull and Boston and Lowestoft, and Brixham and Newlyn, that is Penzance, and Swansea.

1931. Are

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W. H. PIBEL.

[Continued.]

Lord Northbourne—continued.

1931. Are you speaking merely of yourself?—Those are the principal places that I get my supplies from.

1932. At all those places the trawlers bring the fish in and sell it by auction, and we and other merchants buy it, and our men repack it and send it up to London. And also at Fleetwood, that is a large fishing port I had forgotten.

Chairman.

1933. Is it not the fact that upon many occasions in Billingsgate the dealers have been willing to give away their fish, and people had not been found who thought it worth while fetching it away?—That is so. If you will allow me to say so, there is a Mr. Fegan, who has a home for boys and I supply him with fish once a week, and they have told me it is no use sending them small fish, they would rather be without it; it costs too much to cook it; so that I can never send them small fish; I am always obliged to send them cheap large fish.

1934. Is it not the case that some institution was offered these fish for nothing and would not take it away? They said, "No, we will take it if you send it to our door, but we cannot send and fetch it—it is not worth the carriage?—I heard something of that sort, I think.

1935. You said that the law was not strictly enforced in France as it should be. May that be to some extent because there is no such law in England?—I think that has a great deal to do with it.

1936. And do you think the French fishermen would say, "It is very hard if I am to be fined for selling small fish when these perfidious English are carrying them off wholesale to their own markets"?—That is the feeling; they see vessels going down there to catch fish off the French coast.

1937. I think you said in reply to Lord Heneage that if the Moray Firth had never been closed we should have heard very little objection to this measure. Is it not the fact that the principal Scotch fishing industry is that of line fishing?—Yes, it used to be.

1938. Excluding the Aberdeen trawlers?—No, it is not the principal industry in Scotland; that is altogether the herring fishing.

1939. But I mean as regards trawling—if you compare trawling and lining?—I suppose there are many more men engaged in the lining now; but not so many as there used to be; it is not such a big thing as it was.

1940. It is a diminishing trade?—Yes.

1941. But in closing the Moray Firth in the interest of line fishermen, is it not the fact that the authorities were really acting in support of the majority of the fishing industry of Scotland per head?—Yes, per head, certainly. But it was not the closing of the Moray Firth that they objected to: they think that the Board should have made inquiries first to see if they could close it against foreigners as well as Englishmen. What I think they were lax in is

Chairman—continued.

that they closed it without making proper enquiries.

1942. And you think the Board of Agriculture and Fisheries is not likely to take any action without consulting its clients?—Not from what I have seen of them.

[The Chairman here observed that he agreed with me.]

Duke of Abercorn.

1943. You complain of the large amount of undersized fish that you cannot get rid of in your market. Supposing these small fish were protected, would not the chances be that within a couple of years they would be sent to your market in much larger size and perfectly fit for food?—That is so. They would be.

Lord Heneage.

1944. May I put this one more question to you? I want to have this quite cleared up about the Moray Firth, as it has been a bone of contention for some time. The real point is not that the Scotch Fishery Board closed the Moray Firth against trawlers, but that they closed it, and used their authority to close it against British vessels when they could not close it against foreign vessels?—That is so; we presume they did it without proper inquiry.

1945. Therefore, there is a feeling, not only in England but in Aberdeen, that there was an unfair difference made between the two classes of vessels?—That is so.

1946. That is really the burden of the complaint?—I once said to a Dutchman who sent his vessels to fish in the Clyde, "It seems rather an unfair thing," and he turned to me and said, "While you English are such fools as to let us do it you cannot blame us."

1947. Then I will ask you one more question as regards that. Is there not at the present moment, at Grimsby especially, and at the Humber ports, a great sense of regret for the abuse that is now being made of the Norwegian flag by English boats going under the Norwegian flag to get these fish in the Moray Firth because they cannot go under the English flag to get them?—That is so, they do go there.

1948. And the respectable owners of trawlers do not like that state of facts?—No.

Chairman.

1949. Where are the fish that they get sent to?—To Grimsby; they take a foreign skipper and pilot.

1950. Would it pay them to do that if they could not land those fish in England or Scotland?—Yes, they would probably land them in Ostend, and we should probably buy them there, as we have done many a time.

Duke of Abercorn.

1951. Under what flag would they do it?—Under any flag they chose to fly.

The Witness is directed to withdraw.

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MR. ROBERT HENRY GRICE.

Mr. ROBERT HENRY GRICE is called in; and Examined as follows:—

Chairman.

1952. You are a practical fisherman yourself, are you not?—I am.

1953. And are you the owner of a trawler?—No, I am the owner of a small open boat.

1954. You come from Sheringham, on the coast of Norfolk?—Yes.

1955. That is near Cromer?—Yes.

1956. Is there much destruction of small fish by the trawlers?—Yes.

1957. Is there much value in these undersized fish?—No, there is very little value. I might say I have been a fisherman for 40 years, and my principal place of landing fish has been from Lowestoft to Scarborough for 35 successive years, principally at Grimsby, and we have seen fish that have been caught by our own brother fishermen, boxes of them, sold at 1s. 6d. per box; we have taken the trouble to count them out, and they run from 200 to 300 fish sold at 1s. 6d. Good marketable fish at the same time have been fetching 2l and 2l 10s.

1958. The same weight?—The same weight, but not the same size.

1959. Are these fish that are contained in a box worth 1s. 6d. large enough to be eaten?—No, they are only used for the purpose we have heard a good deal about.

1960. You mean fried fish?—Yes, and on different occasions they will be used as bait.

1961. Would there be any feeling created in the minds of fishermen if under this Bill the amount of bait they could obtain should be in any way diminished?—That has been the principal opposition so far as practical longshore fishermen are concerned.

1962. Need you land the undersized fish to get the bait?—In some cases. I quite agree with the provisions of the Bill except that of landing. I can see a double-fold danger in the word landing. All along the shores where these small open boats and half-decked boats fish, they get a considerable amount of these small flat fish; and in the dark, for instance at a time when a sudden storm came up, the fisherman would haul up his net, and in that net in the night you would find perhaps a number of small fish that had got into some part of the net and would not be detected in the hauling in at night; and the danger I see is that the police or bailiffs would see in the net the next morning undersized fish. Under the law that bailiff would be empowered to prosecute such a person, when it is not intentionally done.

1963. But would he land these fish at one of the large ports?—No, it would be along the shore.

1964. Then the Bill gives power to the Board of Agriculture and Fisheries to designate the

Chairman—continued.

ports at which those fish shall not be landed. I am not sure that I may go so far as to say that there is no power in the Bill, but at any rate there is no intention to prevent landing along the shore, as you suggest. That is your only objection, I understand?—That is one objection. Then in the big ports, where they get such immense hauls, from 50 to 60 boxes in one haul, it is a most difficult matter for any practical fisherman to select every fish by the size limit.

1965. But can you not judge pretty well from the eye?—You can judge, but in buying such a number there is no practical fisherman that could judge exactly. Now, we will take the shell fish, for instance. We have a byelaw passed by the Fishery Committee preventing the landing of lobsters under 8 inches. When you are fishing for lobsters you do not know what their lengths are until your fishing operations are over, and then of course you go to measure them.

1966. Supposing you were prosecuted for landing one undersized lobster by accident, do you think that the magistrates would convict?—That has been the case some little time ago.

1967. However, you think it is very desirable that some steps should be taken to prevent the landing of undersized flat fish?—Yes.

1968. And, of course, if you have power to vary legislation, cases of hardship such as you describe could be more easily dealt with than if there was a hard-and-fast Act of Parliament, and you had to go back to Parliament to alter it in any way?—Yes, that would be much better. I did not know it gave that power.

1969. You would prefer to be under a department whose duty it would be to protect rather than to harass the fishermen instead of being under a hard-and-fast Act of Parliament, which might be interpreted in different ways by the magistrates before whom a case might be brought?—It would be much better.

Lord Northbourne.

1970. Who asked you to come here?—I received a letter from the Fishery Department, I believe.

1971. They invited you to attend?—Yes. I have attended at these Fishery Conferences for seven or eight years, and taken a deep interest in the question, and possibly they might have got my name from the Blue Book.

1972. Do you represent anybody else besides yourself?—I represent about 200 fishermen on the Eastern Fishery Board, and it is an everyday question.

1973. Then you are a member of the Board?—Yes, I am a member of the Board. The greatest opposition I might state is this, that foreigners

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Mr. R. H. GRICE.

[Continued.]

Lord Northbourne—continued.

foreigners would get an advantage over British fishermen. That has been all along the greatest opposition upon the whole question.

Earl of Yarborough.

1974. What is the size of your boat?—The size of my boat would be one ton—an open boat.

1975. What is the size of most of the boats of your friends?—They go from one ton up to 30.

Duke of Abercorn.

1976. Do you catch as many fish now proportionately as you did 20 years ago?—No.

1977. To what do you attribute the decrease?—The increase of catching power.

1978. And also the destruction of undersized fish?—Yes.

1979. Would you like one universal law to run along the coast, or would you have it according to districts?—I would like to see it dealt with in respect to districts.

1980. As under the Bill?—Yes; we have proved as practical fishermen that in the months of March, April and May these dear little fish by their own nature are so constituted that they draw in near shore. Even these small vessels do not kill one-tenth of the fish that these large trawlers kill, and we could give the reason. The large trawler has such an immense scope that it takes in the fish, it takes in the brood of fish, the food of fish, and all kinds of material; and naturally the life of the fish is crushed out of it by force of weight. I have been on board trawlers and have seen them throw tons overboard with a shovel that were no use for consumption. They would select from them what they thought really they could make any value of at all, and the rest would be scudded up at one side of the ship and thrown over with the shovel.

1981. How long do you think a small plaice would live under those circumstances on board a trawler?—Only a few on the top of the net would live, in the large trawler nets.

1982. We have had evidence that they are very hard-lived little fish, and that sometimes they have lived as much as eight or ten hours after they have been taken out of the sea?—I have seen some instances, where they have not had a weight on them. I have had some from Lynn, 50 miles off from my place, soles put on the train at Lynn and landed in my house alive. The sole will live much longer than the plaice.

1983. And if this Bill passes and prohibits the landing of these fish, do you think if the trawlers threw what they catch overboard, a large percentage of the smaller plaice would be likely to live?—I think they would be likely to live if this Bill could deal with the mesh of the net. That is the fearful destruction—the mesh of the net—the instrument.

1984. You want a larger mesh?—Yes.

1985. But how would that do for the long fish, the round fish?—Even with the mesh you have now you can hardly get your finger in;

Duke of Abercorn—continued.

there are hundreds of fish, and round fish, that ought to escape and cannot escape.

1986. Then you would increase the mesh?—I should, because we have proved by experimental hauls, with a large mesh net next the vessel, and a small mesh net behind it, that there are a considerable number, and I have heard of considerable numbers that pass through the big mesh into the small net mesh.

1987. What would be your extreme limit of mesh for the trawlers, the smallest limit?—The smallest limit would be what I call three inches.

Chairman.

1988. There are annual conferences at the Board of Trade of those interested in the fishing industry?—Yes.

1989. Have you been appointed a delegate to those conferences?—Yes.

1990. Perhaps it is in that capacity that you were asked to come here to-day to give evidence?—Yes.

1991. Notwithstanding the amount of destruction of undersized fish which you say is done by the large steam trawlers, are you aware that they themselves are asking for this Bill?—Yes, I am.

Duke of Abercorn.

1992. Are the fishermen round your coast, with whom you habitually live and work, in favour of this Bill?—The only opposition I say is that foreigners would get a preference over the British people.

1993. How, in your opinion, would they get a preference over the British people under the Bill?—By prohibiting the landing of these undersized fish they would be allowed to land them in their own country.

1994. Do you suppose that our fishermen would take their boats over to foreign ports and land these undersized fish there?—Not our fishermen, but the foreigner can.

1995. But he cannot fish in our own waters?—But he can fish close to them, and there are a great number of these fish in different places there from 6 to 8 miles from the land.

Chairman.

1996. Do you know anything of the demand in foreign countries for such undersized fish? Do you believe it to be a large one?—I only know that they take them with them. I think there would be no opposition in the least on the part of practical fishermen if there could be an international agreement.

Duke of Abercorn.

1997. Is there much breeding ground in your district?—Yes, from Cromer to the Humber it is splendid breeding ground for small plaice and soles.

1998. And when they come to maturity, have you any idea where these small plaice and soles go to?—Into deep water.

1999. Do

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Mr. R. H. GRICE.

[Continued.]

Duke of Abercorn—continued.

1999. Do they go up north, to the North Sea?—They go north and south too.

Lord Northbourne.

2000. Have you always been a fisherman on that coast, or have you been anywhere else?—

Lord Northbourne—continued.

I have never been below Whitby, fishing. I have been on to the Dogger Bank.

2001. But you have never fished on the west coast of Ireland?—No.

The Witness is directed to withdraw.

Mr. JAMES BLOOMFIELD is called in; and Examined as follows:—

Chairman.

2002. You were lately manager of the Boston Deep Sea Company, owning 36 trawlers, were you not?—Yes.

2003. And you are now general manager of a firm owning 38 steam drifters?—Yes.

2004. Have you had a recent experience of a fishing on what we call the eastern grounds, which I think you know as the Borkum Flats?—Yes.

2005. Can you give us any particulars of that?—During the six years that I was manager of the Boston Deep Sea Company, I sent in a number of statistics from time to time to a Mr. Malan, who was then Fisheries Officer with the Board of Trade, and hearing that this evidence was taken, I volunteered the other day to the Fishmongers' Company to come, and just at the last moment I have been able to get hold of copies of two letters that I wrote to Mr. Malan in March, 1902.

2006. Will you read them, please?—This is March 13th, 1902, to H. N. Malan, Esq., Board of Trade: "Dear Sir,—Referring to the conversation I had with you a few days ago respecting fishing statistics, I beg to inform you that one of our vessels has just landed a voyage of small plaice, about 80 kits of 10 stone each. Complying with your request, we counted the number of fish in one kit, which turns out to be 490 and in course of conversation with the skipper he estimates he threw as many fish overboard as he saved, because in his opinion they were too small to bring to market. He also tells us that there were about 14 steam trawlers in the neighbourhood, many of them being Dutch boats, which we are given to understand saved the whole of the catch, throwing nothing away. The vessel's position was about five to six miles outside the Borkum Light, with the latter bearing S.S.W." This is a copy of the letter written on the day following: "Referring to my letter of yesterday, we have had another boat in from the neighbourhood of the Borkum, and

Chairman—continued.

it has landed a gross catch of about 220 or 230 kits, 180 of which were small plaice. When we came to turn out one of these kits we counted no less than 515 fish. This, multiplied by 180, makes the total number of small plaice landed 92,700. Like the skipper of the boat that landed yesterday, this skipper is quite of opinion that he threw as many overboard as he kept; in fact, he thinks considerably more, because, as he puts it, the bulk thrown away was equivalent to the bulk saved, as it naturally follows they were much smaller fish. We should say a fair estimate of the gross amount taken on board in the first place would be about 270,000 to 280,000 small plaice. If these were allowed to grow to their full size, I estimate, taking them at 3 lbs. per fish, they would be equivalent to 5,560 kits" (I speak of kits because that was the custom of selling fish there) or "thereabouts as much as the whole of our fleet (36 boats) land in a twelvemonth. I think this is a very striking example of the injury done to the trade through vessels following this particular class of fish. As I explained to you when you were over here, it is not our custom to follow this trade, but I am given to understand quite a number of vessels from Grimsby have been working these grounds for some time past, perhaps six or eight weeks. Hoping this information will be of service to you, I am, dear Sir, yours faithfully, J. BLOOMFIELD. This particular lot, 180 kits, realised 58*l* 10*s*. If allowed to mature, say to 3 lbs. each, they would be worth on the present average price 13,900*l*."

2007. From that I gather that you think that if by any means you could prevent the vessels or not make it worth the vessels' while to go to these eastern grounds, there would be a large increase of mature fish in the North Sea?—Yes, I feel sure there would be, from our experience in the trade.

The Witness is directed to withdraw.

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Mr. J. H. BARBER.

Mr. JOSEPH HENRY BARBER is called in; and Examined as follows:—

Chairman.

2008. You are secretary to the Chamber of Fisheries, are you not?—Yes.

2009. Will you explain what the Chamber of Fisheries is?—An association similar to the National Sea Fisheries Protection Association, only with a wider scope to take in all branches of fisheries.

2010. Have you considered the Bill?—Yes, I have it before me.

2011. And do you think it would attain the object which is sought, namely, to prevent the destruction of undersized flat fish?—I think it is a very good Bill, provided due notice is given with regard to any orders which it is sought to make. I think if such provisions as are set forth in the various Diseases of Animals and other Acts were inserted here, the opposition which has come through Mr. Doughty and others would be met.

2012. Do you know what are the powers of the Board of Agriculture to obtain publicity for its orders under the Animals' Diseases Act?—Yes, I have read all those Acts, but unfortunately I did not expect to give evidence to-day, and I have not them with me, but I have read them and am familiar with them.

2013. You know that we work through the County Councils?—Yes.

2014. And we have power to direct the County Councils to give publicity to our orders?—Yes, and you also give publicity from headquarters, I believe.

2015. Perhaps travelling about the country you may have seen placards on gates and barns and everywhere else, setting forth what are the orders in force in a particular district?—Yes.

2016. In your opinion is that sufficient publicity?—I think that would meet all opposition to the Bill.

2017. Perhaps the opposition to the Bill is to some extent founded on an insufficient appreciation of what it is actually going to do?—So far as my personal opinion is concerned I am quite prepared to trust the department. In fact I suggested to the Ichthyological Committee that this department should be formed, so I ought to trust it.

2018. Many people are frightened before they are hurt?—Yes, but I think, it being a new department, some little concession of that sort might very reasonably be given in view of the fears which have been expressed.

2019. At any rate those you represent are in favour of the Bill as it stands?—I think so subject to that and one or two other points. I think in the interests of principle and elasticity, in sub-section (3) of Clause 1, line 17, you might leave out the words after "Fisheries" until "may" in line 19, and leave it to the Board of Agriculture and Fisheries to appoint any officers

Chairman—continued.

2020. You mean to exclude the power of the Fishmongers' Company and the County Councils to nominate officers?—Yes, it should be subject to the Central Board; they should have the control in such matters.

2021. But that is only in addition to the earlier words in the clause, which empower the Board of Agriculture and Fisheries to appoint any officer?—I think if you leave out the words I have mentioned it will have that effect. I do not see why the Fishmongers' Company's officers should not act, but they should act under authority from the Central Board, and the same with the County Council's officers. The Sea Fisheries Committee's officers have not been mentioned here, and we were told the other day that they would like to be.

2022. But there is nothing in the Bill to prevent the Board of Agriculture and Fisheries from appointing an officer of a Fisheries Committee?—Just so; but I think it would be better if that appointment were left with the Board of Agriculture and Fisheries, and not the statutory power given here. There would be nothing in that case to prevent the Board appointing those officers, but they would have power to remove them if necessary. Here they would not. It should be similar to the action of the Local Government Board with their medical officers and so on.

2023. Have you any other remark to make?—I should like to say that the first side note, I think, should read "power to prohibit," should it not?

2024. "Prohibition against landing undersized fish"?—It is not prohibition; it is power to prohibit.

2025. That is rather a small matter?—Yes; and the other should be "power to regulate fishing in territorial waters," in the next side note, not "to prohibit trawling"; the clause does not say anything about trawling. The other point that appears to have come up is the question of opposition. I do not have the fear that Lord Heneage appears to have of such serious opposition to the Bill. My experience when I was with the National Sea Fisheries Protection Association was that we got a 6 to 1 vote in the House of Commons on the second reading of the last Bill.

2026. But you are aware, are you not, that it is not only numerical opposition that stops Bills in the House of Commons sometimes, but it is want of time?—Yes, I am quite aware of that; but I think that if the Bill is got in early this year we might have a reasonable chance.

Duke of Abercorn.

2027. Where does the opposition to this Bill come

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Mr J. H. BARBER.

[Continued.]

Duke of *Abercorn*--continued.

come from, outside the House of Commons, if there is any?—From Lowestoft and Ramsgate and longshore fishermen all round the coast generally. Those fishermen, have many more votes than a large port. Each large port has one or, perhaps, at the most, two votes in Parliament; but those many little fishing villages have many votes. That is where the trouble has been. But in the House of Commons it came to 33 votes against, and 184 for, I think, on the last Bill.

Lord *Heneage*.

2028. I will only ask you two questions. You say that you represent some Chamber, I do not know what?—The Chamber of Fisheries.

Lord *Heneage*--continued.

2029. Which you said had a larger constituency than the National Fisheries Association?—No, a larger scope. They include fresh water fisheries, as you see. That is all.

2030. What does the Chamber comprise?—Its members are about 100 in number.

2031. But from where did the representatives come?—All round.

2032. Are they the same persons who are members of the National Sea Fisheries Association, or others?—Several of them are.

2033. Is it a representative assembly?—I believe so.

2034. Who is the Chairman of it?—Mr. Baxter.

The Witness is directed to withdraw.

Die Jovis, 17^o Martii 1904.

PRESENT:

Marquess of ABERCORN (Duke of
ABERCORN).
Earl of ONSLOW, G.C.M.G.
Earl of YARBOROUGH.

Lord MELDRUM (Marquess of
HUNTLY).
Lord TWEEDMOUTH.
Lord HENEAGE.

The RIGHT HON. THE EARL OF ONSLOW, G.C.M.G., in the Chair.

MR. JOHN FELL is called in; and Examined as follows:

Chairman.

2035. You are Chairman of the Lancashire and Western Sea Fisheries Joint Committee, are you not?—Yes.

2036. Have you seen the Bill that is before their Lordships' house?—I have read it carefully.

2037. And do you think that orders made under it will have the effect of preserving at any rate a certain number of undersized flat fish round our coast?—I hold the opinion, after carefully considering the Bill, that it will be a great advantage to have the Bill in the first instance in the present form, and entrust the power of gradually dealing with the question of undersized sea fish to a central authority, the Board of Agriculture and Fisheries.

2038. You observe that the offence which is provided against in the Bill is not that of selling, but that of landing undersized fish?—Yes, I had the other day a meeting of the General Purposes Committee of my Sea Fisheries Committee, and they went very carefully through the whole of this matter, and they were very strongly of opinion that, in addition to landing, the landing should be clearly for sale, because, for instance, take trawl nets, drift nets, stake nets, there are a certain number of types of net in which fish are inevitably landed and cannot be returned to the sea; and, therefore, I think the words "for sale" should certainly be introduced as well as "the landing."

2039. Do I rightly understand you to mean that you wish to prohibit the landing if the landing is for sale; or do you wish to prohibit the sale as well as the landing?—I should prohibit the sale as well as the landing of undersized fish. If the size of the fish were regulated by any Order, I should prohibit the sale as well as the landing.

Chairman—continued.

2040. In all parts of England?—I think in all parts of England.

2041. Then the effect of that would be, would it not, that if it were sought to prevent the steam trawlers from going to the nursery grounds in the Eastern part of the North Sea and other trawlers or shrimpers were allowed to land undersized flat fish, the penalty on the sale would attach not only to the fish landed from the eastern banks, but to all fish landed from anywhere?—That would be so.

2042. Then would it not be simpler to at once revert to what was proposed in the Bill of 1900 and prohibit the sale in all times and at all places of undersized fish?—I think that that ultimately should come about. So far as my knowledge goes, which is not thoroughly practical, I am of opinion, and my committee were of the same opinion, that this is a matter that will take some time to develop, and I think eventually the absolute regulations which will be settled may take a few years to bring about. We have of course on our west side nothing like the number of deep-sea trawlers which exists in the North Sea, there is nothing like the same fishing interests; at the same time we have a very large number of trawlers, I think there are 35 from Fleetwood, about 18 steam trawlers from Liverpool; Hoylake, in Cheshire, on part of our coast, has over 40 trawlers, and there are about 25 more trawlers in our district. These form the fleet of trawlers in the Lancashire and Western District or connected with it.

2043. Perhaps I may take it that what you wish to convey to the Committee is, that you would desire not that the Board of Agriculture and Fisheries should at once prohibit the sale of undersized flat fish, but that they should be given power to do so if hereafter public opinion should

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[Continued.]

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should appear to be, if I may use the expression educated up to that point?—That is exactly my view.

2044. It has been suggested by more than one witness that possibly something might be arrived at in the direction aimed at by the Bill, if greater powers were given for the regulation of the mesh. Have you any opinion to offer upon that?—Of course the Sea Fisheries Committees who deal with the regulations of the territorial area, endeavour to save the small fish wholly by the process of a regulated mesh, and I may say that from what I hear from the fishermen themselves, they resent very much the position of the steam trawlers and the deep-sea trawler who probably fish along the line of our territorial area or sea fishery district with, perhaps, an inch mesh. As our fishermen say, these deep-sea trawlers are able to clear up everything that we are aiding in the development of within our own district.

2045. Or closely adjoining it?—Or closely adjoining it.

2046. But would not the result of making the mesh larger be the escape of a great number of fully-sized round fish?—I do not think it would. The superintendent of my district is here, and he has very practical and complete experience on all these questions—much more than I have; but, as far as I have read the statistics that we have from time to time furnished to us, I do not think it would interfere with the capture of fair-sized round fish.

2047. Are there any well-known nurseries near your district?—That, again, is a question to which Mr. Dawson, the Superintendent, will reply much better than I can. There are nurseries, and I know there is one place which he will probably detail to you—the most important place—between the coast of Lancashire and the Isle of Man, which is frequented by soles for breeding purposes, and which, during the time the soles are on the ground for breeding purposes, is simply harried to death by trawlers.

2048. Those, of course, are not undersized fish, but mature fish?—Yes, they are mature fish.

2049. How far is that from the territorial limit?—I may be right, perhaps, in putting it at 25 to 30 miles from the territorial limit.

2050. Have you any bye-laws restricting the operations of shrimping within your district?—Yes. When the district was originally formed after the passing of the Sea Fisheries Regulation Act 1888, we held an inquiry throughout Lancashire, and altered very materially the area of the shrimping trawler; the shrimping trawl had become very minute.

2051. The area or the mesh?—I mean the mesh—the mesh had become very minute. At the same time the shrimp trawl takes an enormous quantity of undersized fish—hundreds, if not thousands.

2052. Would it not be considered a great hardship by shrimpers if any regulations were made which interfered with their industry?—There, again, Mr. Dawson will inform you much better than I can; but we have a section of fishermen who reside on Morecambe Bay, and

Chairman.

who have voluntarily on their own account established a process of riddling their shrimps when they capture them (I cannot speak of the matter practically) which they have adopted, and which must be a saving of the young fish, and which might be a very proper and necessary regulation to all shrimpers.

2053. I think as compared with other Fisheries Committees, you have greater financial resources than most of them?—Yes, Lancashire and Cheshire and the whole of the Boroughs of Lancashire after the County Councils were formed fell into line with this idea of the Sea Fishing Committee; and therefore I think our total rate available is about 30 millions on which we assess.

2054. What is the annual expenditure of your Fisheries Committee, and what is the assessment rate in the pound?—We are not allowed to assess our district beyond 1 l-16d. in the pound, and that 1 l-16d. in the pound brings in about 9,000l. a year, I think.

2055. That is very much more than 1 l-16d. in the pound would raise in most of the fishery districts?—Yes.

2056. Have you any vessels patrolling your waters?—Yes, we have a steamer, a very admirable vessel, a police steamer, and we have about seven sailing boats at various stations, with bailiffs who guard the district and watch the observance of the bye-laws. The steamer moves about from point to point.

2057. Do you consider that your area is sufficiently policed?—I am inclined to think it is at present by means of the steamer; the deep sea trawler does not venture much into our limits. He has been captured in the act of doing so, and the magistrates have inflicted substantial fines, and I think they are now very careful.

2058. Have you received any assistance from gunboats of the Royal Navy?—I think we do now receive some aid from the naval stations on the coast, but not much; and I think what we do receive is quite recent.

2059. At one time there was a good deal of expression of desire on the part of Fisheries Committees that they should have more assistance. Was there not from the gunboats of the Navy?—Yes, there was.

2060. Has that been given?—That again Mr. Dawson will give more practically than I can.

2061. Does the Firth of Clyde adjoin your district?—The Firth of Clyde does not adjoin our district, but it adjoins the north section of the Irish Channel, and the action of the law in preventing trawlers going within the Firth of Clyde has injured the deep sea trawler of our district very materially, and has also, so far as we can observe, thinned the upper part of the Irish Channel, because the deep sea trawlers have only been able to work there. The Firth of Clyde though is fished by trawlers who hail from Fleetwood but fly the Danish flag; they come I think in the early part of the year and fish it all through the summer and late out to autumn, and so will capture a very large number of fish. But the deep sea trawlers who hail from Liverpool, Fleet-

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Chairman—continued.

wood, and elsewhere, who used to fish in the Firth of Clyde, are now prevented from doing so by statute.

2062. Is it a statute or an order of the Scottish Fisheries Board?—It is under the same legislation which affects the Moray Firth.

2063. I think that is by order of the Scottish Fisheries Board. With regard to the clause in the Bill giving the same power to the Board of Agriculture and Fisheries to make byelaws which are now possessed by fishery committees round the coast, do you see any objection to that?—None at all; I think it would be very desirable; it would be an enormous advantage to the sea fisheries districts if regulations could be made applicable to the modes of capture so that the modes of capture were regulated as to the taking of flat fish of unreasonable size.

2064. The greater the uniformity the better would be the regulation?—Yes, and the more general assent it would have within the territorial area.

Duke of Abercorn.

2064A. Do you consider that the water with which you are connected on the coasts between your coast and the Isle of Man is over-fished at the present time?—I am not so practically acquainted with that as my superintendent who is here; but I believe it is over-fished and very much over-fished.

2065. Both by the deep sea trawlers and by what may be termed the inland trawlers?—The inland trawlers do not go so far out. Those trawlers who live along the coastline rarely go out much beyond the territorial waters; they occasionally do, but in the main they keep within the territorial area.

2066. And you have a good many stake nets, have you not, on your coast?—Yes, we have, all under regulations and carefully regulated.

2067. Do you know the size of the mesh of those stake nets?—I think it is two inches from knot to knot.

2068. And I suppose they catch a large number of undersized fish?—They capture a good many undersized fish, because the small flat fish coming down seaward again after being up feeding stop about these nets I believe, and they are not exactly, many of them, captured in the nets, but they are checked by these nets and caught. The nets now take on an average (I often see the products of them) what would be regarded as pretty fair sized flat fish, mainly plaice and flounders.

2069. What happens to them when they are caught?—They are all sold.

2070. Landed and sold?—Yes, hawked about by local fishermen or sent to the more populous places.

Lord Tweedmouth.

2071. Is it your opinion that the fisheries in your district are improving or falling off?—The only fish which has significantly increased is the sole; there has been a significant increase of sole, and we attribute that very much to the use of a larger mesh. There was an agitation a few years ago, and the Board of Trade, who then had the Fisheries Department, acceded to a reduc-

Lord Tweedmouth—continued.

tion. We had originally a 7 inch mesh; that is $1\frac{3}{4}$ inch, from knot to knot; and then the fishermen agitated and succeeded in getting the mesh reduced to $1\frac{1}{2}$ inch from knot to knot for certain periods in the year. We go back to the 7 inch after November; but there are a great abundance of soles in the district, and a fair sized sole can get through a 7 inch mesh. We go to a 6 inch mesh, but there is no smaller mesh than a 6 inch one; and that enables comparatively small soles to get through. Anyhow the whole line of our sea fishery district has significantly increased in soles. In plaice the last year or two there have not been so many as formerly. Occasionally there were a great number of plaice coming into the district; but in the last year or two there have not been so many. As to round fish, there is a great shrinkage in that. Haddock have not been in the district for some time; mackerel do not come so numerously as other fish; but cod, whiting, are pretty much as they have been.

2072. Then the result of your operations as a sea fisheries committee has been that the quantity of soles has increased, but with regard to plaice and other fish, round fish, no increase has taken place?—I think not.

2073. Do you attribute any such decrease as there may have been to over-fishing?—To the use of the small mesh net immediately external to the territorial area; it is quite notorious. Take a steam trawler: she finds herself amongst a fair collection of plaice. I have not seen the operation, but I know it occurs; she ranges this area stocked with fish, puts down a buoy, and works round this until she has practically cleared up the whole area.

2074. Then really, so far as your district is concerned, what you think is desirable would be, sound regulation checking the steam trawlers?—It would be most desirable that there should be regulations to prevent the steam trawler capturing flat fish of an immature size.

2075. Then, so far as you are concerned in your district, if the steam trawler was prohibited from landing undersized fish, that would meet the requirements of your district?—Yes. You can of course capture, even with a 7-inch mesh, dozens of very small fish.

2076. I think you might almost say you cannot help capturing them?—You cannot help capturing them. I am only an amateur, but I have very often seen trawls worked experimentally, and the great bulk of the small fish are alive for a considerable time afterwards. Soles and plaice seem to live, I might say, some hours; it is extraordinary how they live; and there is no difficulty really in sorting them and putting them overboard.

2077. It depends very much upon the length of time the trawl is down, does it not?—Yes, and also as to the condition of the trawl, and the weight of the trawl and so on; there are a great many points of that sort.

Lord Heneage.

2077a. You are of opinion, are you not, that it is advisable to have the Bill in this form that the department may learn by experience in the future?—Exactly; that is just my view.

2078. 1

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[Continued.]

Lord Heneage—continued.

2078. I may take it that you are also of opinion, as that the trade generally are, that under those circumstances the Government would be in a better position to ask other nations to enter into an International Convention on which permanent legislation might be passed?—I am quite of that opinion.

2079. I believe that is a very recent opinion in both cases?—That may be so. My original idea was that it would be desirable to limit the sizes definitely by statute; but I have gone closely into that and I think that on the whole it would be much better to entrust it to the Department.

2080. That is the change of feeling that has generally come over the trade, that instead of having a fixed limit in the Bill you should give power to the Department at present, so that they may learn by experience?—I attended a large meeting of the General Purposes Committee of the Lancashire and Western Sea Fisheries Committee on Friday last, and there were present at that meeting a great many fishermen actively engaged, and men connected with trawlers, and they were all unanimously in favour of the scheme of the Bill.

2081. You spoke with regard to Sale; I did not quite understand whether you meant that the Bill should be qualified by the words, "landing for sale," or whether you meant that that the landing and the sale of fish should be prohibited?—I should use the words "landing for sale," but I am not a draughtsman.

2082. Then the "for sale" would be the qualification of the offence?—"For sale" would be the qualification of the offence.

2083. And would not be an additional offence?—No, not an additional offence.

Lord Tweedmouth

2084. I suppose what you mean really is, that in using certain nets, when you draw the net you cannot help landing these small fish?—That is so. Take the draft net that is usual on our coast; they bring out on the beach or shore large quantities of fish, and those fish seldom go back again.

Lord Heneage.

2085. I am only trying to elucidate your opinion. You see the difference between "land-

Lord Heneage—continued.

ing for sale" and "landing and sale"?—Yes.

2086. Under the Bill of 1900 the words were: "No person shall import, export, buy, sell, expose for sale, consign for sale, or have in his possession for sale"; are those the words you wish to see in?—"Have in his possession for sale."

2087. Has there been much loss to the shrimpers in your district on account of your bye-law?—I do not think so. I think the shrimping industry, I might say, is in too thriving a condition. I only judge by this that we know what number of boats they build, and the very considerable industry which it is. I think the shrimpers do not complain at all. There is one section in the Lancashire Shrimpers who are rather troublesome, but the great bulk of the shrimpers on the Lancashire coast, where they mainly are, are a very thriving class.

2088. Is it a fact that they landed over 50,000L of shrimps last year?—My superintendent will be able to tell you that, but I think about 50,000L is the right figure.

Chairman.

2089. Your idea, is it not, that it might be a hardship upon a man who could not avoid landing small fish, if there were a penalty attached to it; is not that your view?—My view is that if he lands them? a shrimper for instance might take home small fish. I do not think that he should be necessarily prevented from doing that; but if that fish were undersized fish, and were exposed for sale, then there should be a penalty.

2090. Under the elastic provision of the Bill, of course, it would be perfectly possible to exempt some places if it were thought desirable to do so?—Yes.

2091. Then with regard to the size of the mesh, you said, I think, that there had been a remarkable increase in soles?—Yes.

2092. May it not be that the sole is the first to be affected by an increase in the size of the mesh, for this reason, that it escapes more easily than the other fish?—I believe that is why it has come about that we have had an increase. The 6-inch mesh will capture a very small plaice, but not a very small sole.

The Witness is directed to withdraw.

Mr. ROBERT ARTHUR DAWSON is called in; and Examined as follows:

Chairman.

2093. You are an officer, are you not, of the district that Mr. Fell is Chairman of,—the Lancashire and Western Sea Fisheries District?—Yes.

2094. You have heard the questions addressed to him, and there were some points on which he informed the Committee that you could give better information than he could; perhaps you will kindly extend and elaborate the evidence which he gave?—About the increase in soles, there is no doubt from general observation and judging from the fishermen's catches during the last two or three years, that soles have increased

Chairman—continued.

in number. A great deal of that, I think, is due to the enlarged mesh in trawl nets, not only perhaps in the district itself, but many of the fishermen, I think, are now thinking more of the value of their fisheries, and outside as well as inside the district, especially in the summer, they are using the same mesh; therefore in that particular time to a certain extent the mesh both outside the district and inside has had a good effect.

2095. Are there large nurseries in the neighbourhood of your territorial waters?—The Lancashire and Western Sea Fisheries District, from the

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[Continued.]

Chairman—continued.

the northern extremity down to the Menai Straits, is practically a nursery; in fact, the nursery is in the territorial waters for that part of the Irish Sea.

2096. In the territorial waters you say?—Yes, I mean of course inside and just outside; it is along the land.

2097. But is it within the area of your bye-laws?—A great portion of it.

2098. Then do I rightly gather that what you would like would be an extension of your bye-laws, if that could be done, to the waters adjacent thereto, so as to protect the whole of those nurseries?—That would do great good.

2099. Is their complaint of a falling off in the size of the fish generally?—No, if you are speaking of soles.

2100. No,—of plaice?—As regards plaice, they are certainly not increasing, and in my opinion they are certainly falling off in size, what are taken.

2101. Is there an increasing disposition on the part of the trade on the West Coast to submit to restrictions with a view to increasing the size of the fish?—I presume you are alluding to the fishermen.

2102. I am alluding to the fishermen of course?—I think there is. It is only the other day, or a little time ago, since a petition was presented to the Lancashire and Western Sea Fisheries Committee, by the Hoylake deep sea trawlers. These trawlers fish both inside and outside the district, and they were perfectly willing if they could use a 6-inch mesh the whole year round west of Great Orme's Head, to use that mesh both inside and outside the district.

2103. You think that although they might possibly not be prepared at this moment for a hard and fast Act of Parliament preventing the landing or sale of undersized fish, if you had an elastic measure the time may not be far distant when they may come to petition the Government to impose restrictions upon them in the general interest?—I think so. I think the fishermen as a body would prefer a size limit to a mesh limit, because the size would regulate the mesh.

2104. In drafting your bye-laws, I presume you consult the fishermen, and what you do you do in their interests and not against their interests?—That is so. The mode of procedure is this: The bye-laws are drafted by the committee. Then the committee hold inquiries in different parts of the coast. They meet the fishermen, and I think in all cases where a bye-law has been confirmed by the Board of Trade, there have been objections from certain fishermen on different parts of the coast, and public inquiries on all occasions have been held.

2105. And generally you think the system is approved of by the fishermen?—The size of the mesh do you mean?

2106. No, your system of making bye-laws, inquiries, and so forth?—Yes; but of course, we always find some men that oppose them.

2107. But are they in a minority?—I could not go as far as to say that.

2108. About the shrimps, is it the fact that 50,000*l.* worth were landed last year in your district?—I cannot say as to last year, but I (0.10.)

Chairman—continued.

value the shrimping industry on the Lancashire and Cheshire coast as certainly between 40,000*l.* and 50,000*l.* a year.

2109. Notwithstanding your bye-laws it is in a very flourishing condition?—As regards the quantity of shrimps taken, that is so.

Lord Tweedmouth.

2110. With regard to the mesh, is it ever said, when you get beyond a certain size of mesh, that a big mesh acts as adversely to the fish as a small one?—There is not the slightest doubt that a mesh of a certain size riddles the undersized fish out. I have some statistics here which I should be willing to hand in.

2111. If you please?—For instance, here is the result of a haul, one of the trials; there are a number; I may perhaps read one. This is a case of a trial with a trawl net of a 7 in. mesh. The cod end of this net had a second net of 4½ in. mesh laced round it in such a manner that no fish could enter the latter without having first passed through the meshes of the trawl net of 7 in. mesh. The net was down one hour and when the net was hauled there were 683 flat fish in the net of 7 inches, and 4,413 had passed through and were retained in the net of 4½ inches; and on another haul 7,260 flat fish were riddled through. There are a number of these experiments there. (*Handing in the Superintendent's Reports, July 31st 1894, December 31st 1899, December 31st 1903.*)

2112. But I have also heard it often said that when you get a very big mesh the strain on the net draws the mesh so close together that the fish cannot get out. Is that your experience?—No, that is not our experience.

2113. You understand what I mean: that the strain on the net draws the mesh so close together that the fish cannot get out?—Yes, I follow that. I have noticed it particularly, and it is not my experience.

2114. Though you have noticed a falling off in the size of your plaice you have noticed no falling off in their numbers?—Yes, the catches are not as large as they used to be; the takes of plaice in weight also are not as large.

2115. Do you attribute that to over fishing, or do you attribute it merely to the ordinary fluctuation among fish?—I attribute it certainly to over-fishing.

2116. By what,—by trawlers, or by stake nets, or what?—By both: principally by trawlers, both inside trawlers and deep-sea trawlers; both the deep-sea sail trawler, the steam trawler, and the inshore fishermen as well; and especially in the nurseries.

2117. Do you notice that the small fish are in what you call the nurseries more especially at certain seasons of the year?—Yes; we have the small fish inside the district in greater quantities in the summer months, and up to, say, the end of November.

2118. Would it be practicable to prohibit fishing on any special grounds during certain seasons of the year altogether?—That would be I think rather difficult to carry out.

2119. On account of the policeing?—On account of the policeing. And then, if you take a small

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[Continued.]

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a small area, the fish do not always stop on that. For instance, you may go one week and find it crowded with fish on a small area, and the next week they may very easily have moved, certainly some miles along the coast.

2120. You were not very clear as to how the regulations were accepted by the fishermen in your district; do you think that the majority of the fishermen are against these regulations?—I do not think so; I think they are not against regulations. A number of the fishermen are perfectly satisfied; they want no change of any kind. We allow a 6 inch mesh from June 1st to 15th November in most parts of the district, and a 7 inch mesh is enforced during the remainder of the year. What many of them ask for, and from different motives, is that the 6 inch mesh should be allowed the whole year round. That is, I think, the only objection that we have at the present time to any of the bye-laws.

2121. So far as the territorial waters are concerned, the waters within your own district, do you think that you have sufficient power already for all practical purposes?—No, personally I think prohibiting the landing and sale of fish of certain sizes is the way to stop the decrease. We enforce certain sizes of meshes, but of course outside the boundary line of the District they can use what mesh they like; and as a matter of fact many fishermen when they get a chance come inside. My opinion is that so long as the market is open for the sale of undersized fish, fishermen will take them. For instance, in my district we have by-laws for the purpose of preventing the taking of undersized fish, both shell fish and sea fish, yet we have had as many as 906 prosecutions, which I think shows at once that so long as the market is open for the sale they will take them.

2122. Then you do not think that the prohibition of landing is sufficient?—I do not.

2123. But you are quite clear about prohibiting the sale also?—I am perfectly clear about that.

2124. Do you desire to have this power for your District Committee, or do you think that it should be exercised only by the central authority?—I think there ought to be a universal law for the whole country and that it should not be limited to certain districts.

2125. You think that any such regulation should be applied to the whole country and should be applied to all classes of fishermen?—I do.

2126. Without any restriction of certain classes.—Yes, without any discrimination in any shape or form. Will you allow me to make an allusion about the Clyde?—I think you asked Mr. Fell a question about it.

2127. If you please.—The question of the Clyde is, of course, a very very sore point among trawlers on the Lancashire coast, and for this reason: Before the Clyde was closed, many of the trawlers used to leave what we call the home grounds for three or four months in the year and used to fish in the Clyde. That gave the home grounds a rest. But now they are not permitted to fish in the Clyde, and of course it makes so much more fishing on the home grounds, and since the steam trawlers commenced on the coast, several of them fish here

Lord Tweedmouth—continued.

as well. And yet the foreign fishermen can come into the Clyde and can take the fish from there and bring it into Fleetwood.

Chairman.

2128. But they cannot sell it in Scotland?—No, they land it at Fleetwood.

2129. They cannot land it in Scotland?—No.

Lord Tweedmouth.

2130. And yet in spite of this increased fishing due to the closing of the Clyde, you notice a distinct increase in the number of soles?—Yes, but not in plaice.

Marquess of Huntly.

2131. You do not approve of regulations which permit foreigners to fish in these waters that are closed, and not our own fishermen?—No, I look upon it that the ground is not closed. The ground does not get the benefit of being closed, and the English fishermen are prohibited from taking the fish.

Duke of Abercorn.

2132. Would you have one uniform limit along the whole of the coast with regard to the capture of undersized fish?—Yes.

2133. And can you tell the Committee what you think the proper limit should be for, say, undersized plaice?—It is rather a difficult matter to go into. I may say a petition was presented some years ago by the fish salesmen of Lancashire to the Committee, pointing out the fact that the fisheries were decreasing and asking that the capture of fish under certain sizes should not be allowed. Would you like me to hand in a copy of their petition?

Chairman: Yes, if you please. [*The same is handed in.*]

Witness also handed in several Lancashire Sea Fishing Laboratory Reports containing Vitality experiments.

Duke of Abercorn.

2134. If this Bill related only to the capture and not the sale of undersized fish, do you think the fishermen in your part of the country would be able to evade the law by getting fish landed elsewhere and sending them to market?—I feel sure they would try, and in many cases they would succeed.

2135. In regard to the increase in the capture of soles, have any new fishing grounds been lately entered upon by the deep sea trawlers; because the larger the trawler is, I mean the steam trawler, the deeper the water he is able to fish?—No, there have been no new grounds with regard to our sailing trawlers. There is no doubt that the steam trawlers go further afield now than was the case years ago.

2136. But do not you think that possibly this increase in the capture of soles may be partly due at any rate to these large trawlers entering upon new grounds?—No; and my reason for saying that is that the sailing deep sea trawlers are fishing on the same grounds as they used to do, and bring in more soles.

Chairman.

2137. Do you think that it is necessary, in the general interest of sea fishing, to prevent the sale

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[Continued.]

Chairman—continued.

sale of every undersized fish round our coasts?—No. I think it is with regard to flat fish, certainly with regard to plaice.

2138. You think it is desirable to protect every undersized flat fish round our coasts?—Yes.

2139. You do not think that it would be sufficient to protect the nurseries where those young flat fish are hatched and pass the earlier part of their lives?—That would go a long way towards it, but as I mentioned before, the fish do not always stop in one place, they move about.

2140. Supposing from a practical point of view it were possible to secure from Parliament legislation which would protect a great number of undersized flat fish in the sea; would you prefer to have such legislation or to wait until you could get every undersized flat fish protected?—My opinion is that it would be better to have all undersized flat fish protected, but if this cannot

Chairman—continued.

be done at once then I say it would be better to have the first, that is, to have a great number protected.

2141. You would like to begin experimentally?—Yes, in that case.

2142. Now, with regard to trawlers. Would it be as easy for the deep sea steam trawlers to land their undersized fish as it is for the small sailing trawlers, if the landing was prohibited?—I can hardly say that. I should not say it would be any more difficult.

2143. Do you know anything of the evidence which was given as to the proportion of fish landed at the principal ports?—No.

2144. You are not aware whether 97 per cent. of it was landed at thirty-five of the principal ports and only 3 per cent at the other 112 ports?—No.

The witness is directed to withdraw.

Mr. WALTER GARSTANG is called in; and Examined as follows:—

Chairman.

2145. You are connected with the Marine Biological Association, are you not?—Yes, I am the Naturalist in charge of the Fishery Investigations of the Association.

2146. And your headquarters are at Lowestoft and Plymouth?—Our headquarters for fishery work have been transferred from Plymouth to Lowestoft since the International investigations began.

2147. You have seen the Bill under the consideration of their Lordships?—Yes.

2148. And you observe that it is an enabling Bill, and that it would be necessary, to carry it into effect, for the Board of Agriculture and Fisheries to make certain orders.

2149. Those orders would relate to various matters, one of which of course would be the size of the fish prohibited and the ports at which they should be prohibited. Have you any observation to make to the Committee upon the size?—I understood that it would be premature to offer evidence as to what size limits should be proposed at the present stage. The matter was postponed by Parliament in 1900 for further inquiry, and the reports of the international investigations on those inquiries have not yet, in the first place, appeared. I am therefore not prepared to offer evidence at the present stage as to what size limits are desirable. The evidence that I am rather prepared to give at the present time is as to the efficacy of national legislation on the one hand and as to the prospects of international regulation on the other.

2150. But when you talk of national legislation, I suppose you mean the Bill under consideration?—Yes, the Bill under consideration.

2151. Which is, is it not, an enabling Bill?—Yes.

2152. Therefore is it possible for you to give any expression of opinion upon the Bill unless you are prepared to give an expression of opinion as to what should be the orders of the Board under the Bill?—Yes; I think there are certain aspects which can be dealt with at the present stage without committing ourselves too definitely as to what size limits should be adopted in (0.10.)

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future. The question of protecting flat fish arises from the general impression that the sea is being impoverished, that the abundance of fish in the sea is less than was formerly the case; and this is based on the experience of fishermen, that their catches from year to year are going down in abundance. Some few years ago I tried to put together the statistical evidence on this point, and I submitted it to the Committee of 1900. In that paper I showed for a large number of different fisheries, that the complaint of the fishermen was correct, that the average catches per boat had been declining for a continuous term of years. But it has been pointed out by various critics, that to conclude from that evidence that the abundance of fish in the sea is less now than was formerly the case is a logical fallacy; that there is another possible explanation,—in other words, that the number of boats fishing in the sea has attained such a degree of development that the total quantity of fish caught by these boats bears now a large instead of a small proportion to the total abundance of fish in the sea, and that, consequently, the available stock of fish in the sea has to be divided amongst the increased number of boats, thus bringing about a decrease in the average catch. It is a little difficult to go into the point, but the fact is simply that it has been pointed out, and I have accepted the criticism, that it is impossible merely from the evidence of the decline in the average catch of the fishermen with an increasing number of boats, to conclude that there has been an impoverishment of the grounds.

2153. Do you mean to convey to the Committee that you believe there are as many fish in the old area that used to be fished by vessels leaving England now as there were twenty years ago?—No; my point is that there is no proof now, no proof has been accepted as satisfactory, that there has been a decline in the stock of fish; no statistical proof at present to show that the abundance of fish in the sea now is less than was formerly the case. The arguments which have been previously adduced have been subjected to destructive criticism.

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2154. Have

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Chairman—continued.

2154. Have you ever inquired into what was the average catch of the old sailing trawlers?—Yes.

2155. Have you enquired into the average catch of the present steam trawlers?—Yes.

2156. What proportion should you say should sailing trawlers bear to steam trawlers; how much more does the steam trawler catch than the sailing trawler?—The conclusion I arrived at was that the catching power of a steam trawler relatively to a smack of a constant size has varied through a term of years, has increased in fact, owing to the fact that the size and efficiency of the steamers themselves has increased in that time and that the gear used by the steam trawler has itself greatly increased in catching power. I mean the substitution of the otter trawl for the beam trawl has caused in itself a great increase in the catches of the steam trawlers. Consequently the conclusions that I arrived at were, that whereas the catching power of a steam trawler compared with a large deep sea smack would be about four to one some twenty years ago, it is more like eight or ten times the catching power of such a smack now.

2157. Therefore is your theory that the fish in the sea is as abundant as ever?—I say it is not my theory; I merely say it has not been proved that they are not as abundant.

2158. If it has not been proved that they are not as abundant you would naturally expect that the steam trawler would catch eight times as much as the old sailing trawler?—Yes.

2159. And if it were proved that it was not the case, that they did not catch more than about twice as much as the sailing trawlers, would it in any way tend to shake your opinion that the fish in the sea have not diminished in numbers?—The whole thing has been undermined in an argument of that sort by consideration of the fact that the annual catch of the individual boat is no longer a measure of the abundance of fish on the grounds, but is itself influenced by the quantity of fish being taken at the same time by other boats.

2160. May I take it from you then, that you have no opinion really to offer to the Committee as to the abundance of fish in the sea at the present time; that there is no evidence before you which enables you to come to a conclusion upon the point?—My view is that the evidence is conflicting; it has not yet been determined what amount of the annual decline in the average catch is due to a declining abundance of fish on the grounds, and what amount of that decline is due to this factor caused by the excessive multiplication of fishing boats.

2161. Do you expect that from time to time additional evidence will come forward and enable you to express a decided opinion upon it?—Yes; there is a great amount of evidence now being collected, both from England and other countries, of a statistical and experimental character, which will enable these questions to be decided quite definitely in a short term of years.

2162. Do you think it would be less desirable to proceed in legislation by way of a hard and fast line or in the experimental manner which is suggested in the present Bill?—I think there

Chairman—continued.

are distinct advantages in the elastic powers which are proposed in the present Bill, because I myself hold, from the evidence that I have at present, that the problem is not the same for different classes of fishing boats; for the steam trawlers which fish in the northern parts of the North Sea and for the smacks which fish in the southern parts of the North Sea. Although the nurseries for flat fish for both those fisheries are on the eastern Continental grounds, yet the problem is not quite on the same footing. In the case of the most eastern grounds, roughly speaking those on the west coast of Denmark and Germany, the chief fishing is carried out by the steam trawlers, not exclusively, because all the Danish fishing boats are sailing vessels, and there is a good fleet of German trawlers, which are also sailing vessels: but on the other hand the great bulk of fish from that region is captured by steamers. Now the nurseries of the southern grounds, those which are fished over by the Lowestoft and Ramsgate smacks and a great fleet of Dutch smacks, and so on, are also on the Continental grounds; but they are situated, so far as we understand at the present time, further south along the Dutch coast; and although these two fishing grounds, the grounds for the steamers and the grounds for the smacks, have this property in common, that their chief nurseries for flat fish are on the continental shores, yet the most intense fishing on the northern nursery—that is to say, the Horn Reef grounds—is carried out by English steamers; whereas it cannot be said that in the southern area the fishing on the small fish grounds is carried out most intensely by the English boats. And my point is that if a regulation is passed that the English smacks in the southern area are not to fish on those small fish grounds off the Dutch coast, or if a size limit is imposed which makes it impossible for them to fish on those grounds with any profit, the only result will be that a large number of fishing-boats belonging to Dutch and Belgian nationalities will carry on the fishing on the nurseries as much as before, and, owing to the intensity with which fishing operations are now carried on, they will themselves increase their own catches in proportion as the English boats do not participate in the fishing.

2163. Do you know the proportion of English trawlers to foreign?—It is given in various official reports; I do not remember the figure exactly.

2164. It is something like ten to one, is it not?—No. So far as the smacks are concerned in the southern area between the English and Dutch coasts, I should say there are about 350 or 400 English smacks, and quite the same number of Dutch and Belgian boats; so that the consequence is that the fishing power of England and the fishing power of the Continent in that southern area is about equal. I admit that in the northern grounds, that is to say, on the Horn Reef Grounds, there is now a preponderance of fishing power in favour of England, that is to say, English steam trawlers are there in greater numbers and catch the greatest quantity of fish. I have been at some trouble to try and determine what

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what is the relative amount of fishing power exerted by England on the one hand and by Germany on the other on those Horn Reef Grounds. It is somewhat difficult to get it exactly, but I have consulted the Danish Official Reports for a term of years past, and have taken from them the total number of steam trawlers observed from the Horn Reef Lightships from month to month in each of the last seven years—that is, the total number of steam trawlers observed from those lightships. Then the Danish authorities are also able in many cases to distinguish the nationality of these steam trawlers; they cannot distinguish from the lightship the nationality of all the steamers they observe, but they do distinguish the nationality of a certain number. I have tabulated these out on sheets here in a form that I will lay before the Committee. (*Vide Appendix, .*) The results are briefly as follows. If we take the year round on the Horn Reef Grounds, the watch on the lightship have observed the following average number of steam trawlers fishing on or voyage past their lightship. In January the number is 41.

2165. 41 of what nationality?—That is altogether, first of all.

2166. Are you going to give us the nationalities afterwards?—I will give the nationalities afterwards. In January, 41; in February, 31; in March, 63; and then in April there comes a great increase—in April, 246; in May, 271; in June, 337; in July it begins to fall off, 190; August, 140; September, 108; October, 171; November, 172; and December, 119.

2167. Do not those figures closely approximate to the months in which the greatest number of young undersized flat fish are to be found there?—Yes they afford statistical evidence as to the great increase in the fishing on the Horn Reef grounds during the spring months.

2168. Just at the time when there are most undersized flat fish?—Yes. Then passing from that, I have tabulated the observations of the men on this lightship as to the nationality of the different steam trawlers, and first of all I give the figures for the English steam trawlers. This is the monthly average for seven years: In January they observed on an average 2 English steam trawlers; in February, 1; in March, 6; in April, 34; in May, 44; in June, 51; in July, 24; and then there comes a falling off, in August, 8; September, 4; October, 6; November, 8; and December, 2. The corresponding figures for the German steam trawlers are as follows: January, 8; February, 8; March, 16; April, 79; May, 64; June, 101; July, 62; August, 56; September, 40; October, 37; November, 75; and December, 21. The result is, you observe, that so far as these observations are concerned, the number of German steam trawlers greatly preponderates in each month over the number of English steam trawlers observed from that lightship. On the other hand, it has to be borne in mind that the lightship lies exactly on the line of route between the German ports and the trawling grounds in the Skagerrak; consequently a great many of the German vessels observed were not fishing on the grounds, they were

Chairman—continued.

merely voyaging up and down; whereas you may take it for granted that almost all the English vessels were actually fishing, not all, but the great majority. But in order to try and determine more exactly what was the relative number of German and English boats fishing on the grounds, the only sources of information that I am aware of are those contained in the Danish Reports, which report the number of seizures of foreign vessels for fishing in territorial waters, and also which report the number of foreign vessels, that is to say, other than Danish vessels, which were arrested for doing damage to Danish boats in collisions, and so on. I have tabulated these out, and there are a few copies of these that I can hand in at once to your Lordship's Committee (*handing in the same*). The Danish Reports give for a term of years a numerical list of the number of British and German steam trawlers, as well as of German sailing trawlers which were arrested for fishing in territorial limits, and they give similar information for the same classes of vessels concerned in collisions, and so on. You will observe from the figures that now we have a different state of things. The preponderance is now on the side of English vessels. The figures which I might briefly run through no longer go by months now, but give the totals for the entire year. I need not give the details—I have given the details on this sheet for each year from 1894 to 1901, and then I have added them up and they make a total of vessels arrested for fishing in Danish territorial limits, of 78 English or rather British steam trawlers; 18 German steam trawlers; and there were 23 German sailing trawlers. That shows that the number of English vessels was very considerably in excess of the German. (*Vide Appendix, .*)

2169. But now these figures would all be greatly affected, would they not, by the desire to respect the international law, or rather the national laws of the two countries. Do you allege that the German trawlers or the British trawlers are more inclined to break the law?—No, I am assuming that they are equally adventurous. I assume, in order to try and get an approximate valuation of the amount of fishing, that the Englishman is not more inclined to break the law than the German, although I daresay it is possibly true that he is, a little bit; but on the whole I think the figures may be taken (seeing that half of them are accidental things or collisions) as reliable in giving information as to the relative number of English vessels fishing on these grounds compared with the relative number of German. The grand total for the whole term of years is 125 British steam trawlers as against 28 German steam trawlers and 35 German sailing trawlers. In the first year or two there were a few English smacks from Hull and Grimsby concerned; but they are now extinct and no longer affect the figures. On the whole we see there are 125 British fishing vessels as against 28 steam trawlers and 35 sailing trawlers, that is to say, 63 German vessels; in other words there are only twice as many English vessels fishing on those grounds as there are German vessels.

2170. Can

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2170. Can you tell us the total of the German steam trawlers?—The total of the German steam trawlers is about 120 or 130. The total number of English is of course something like 1,200, about 10 to 1; but the value of the figures I have submitted is that they show that a far larger proportion of the German vessels than of English fish on the Horn Reef grounds.

2171. They are nearer home?—They are much nearer home, and they have a greater chance. Anyhow the fact remains that a greater proportion of German vessels are fishing on those grounds than English vessels. Consequently we cannot argue, as regards the intensity of fishing on these grounds, from the fact that the English steam trawlers are ten times as numerous as the Germans, that therefore we fish ten times as much on those grounds as the Germans. On the other hand, these figures seem to me to show that we fish very little more than twice as much on these Eastern grounds as the German vessels.

2172. But is not the remarkable thing, not that the Germans fish there more than than we do, but that we should be fishing there at all?—Yes, and I am coming to that now. The point is that we have now a Bill which proposes to give power for placing a size limit which would make it unremunerative for British steam trawlers to fish on those grounds.

2173. You hold that it would do so?—It depends entirely on the limit.

2174. On the limit of size?—Yes, the effective size.

2175. But you are not prepared to give us an opinion upon that?—No, I am not prepared to give an opinion as to what size limit should be adopted now; but I am assuming that if the Board have got the powers they will impose an effective size limit.

2176. And you are not prepared to say what in your opinion an effective size limit would be?—I wrote to Sir Thomas Elliott to ask whether evidence was to be given upon that point, and I was informed that he thought the Committee would not consider it.

2177. The Committee have considered it; but if you say that you are not prepared to express an opinion upon it, I do not wish to press you.—I am not prepared to give a definite limit. I can give an approximation, if that is of any value; but of course our investigations are only beginning.

2178. Will you say what limit in your opinion would be insufficient to protect the Eastern grounds?—I am quite of the same opinion that I was in 1900, that an eight inch limit would be useless as a protection for those Eastern grounds. I held the view then that an eight inch limit would be quite useless, but that a twelve inch limit would be useful, that is to say, would be effective; and I consider that that has been demonstrated already by our investigations. But as to the precise limit, whether it should be ten inches or eleven inches, that is to say, as to the precise minimum limit which we ought to adopt, I think the investigations should go on for another year before we ought to be asked to express a definite opinion. But somewhere

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about ten or eleven inches I think would probably do a great amount of good.

2179. But supposing you were wrong or we were wrong, there is nothing in the Bill to prevent our altering the limit the very day we found out we were wrong.—No, and so far the Bill is good, in that it gives power to the Board to amend its own regulations. I quite approve of that, so long, of course, as the limits are based upon accurate investigations continued during the period. But my point is, if I may revert to my former arguments, that owing to the intensity of fishing nowadays, it is admitted by the English Inspectors of Fisheries, and foreign authorities also, that the catch of a trawler does not any longer depend only upon the abundance of fish on the grounds and its own fishing capacity, but it depends also on the number of other boats fishing. Consequently, if there are only twice as many English boats fishing on the Horn Reef grounds as there are German, if you remove all the English trawlers from fishing on these grounds, it is practically certain that the German vessels will increase their catches in the same proportion; that is to say, no purely national limit or national regulation at the present time will really arrest the destruction of small fish.

2180. Not if it were applicable to foreign vessels as well as English?—I said a national limit; I mean a national limit purely for English vessels.

2181. But if there were a limit applying to foreign vessels?—I am coming to that; that forms the second point in my argument. A limit which is only applicable to English vessels might do some good in arresting the destruction of fish on the eastern grounds, but it would not be really effective until the large number of German vessels which are fishing there, and have these grounds within their easy reach are also under the same restrictions.

2182. Would you carry that argument so far as to say that the German vessels would catch as many undersized fish as the British and German vessels put together do now?—No, I think it is practically certain that they would not catch quite as many, but it is already admitted by those who have inquired into the matter, that their catches would be increased if you took away any other fishing vessels, so that, while being as anxious as anyone to assist in effective legislation which will really improve the fisheries, I feel that this point is worthy of consideration, whether we shall not be to some extent deluding ourselves if we hope that a permanent settlement will be arrived at if we merely regulate the English fishery.

2183. Do you know whether German vessels which are bound by a limit, undoubtedly a small limit, land those fish under the size which is prohibited in Germany, or do they throw them overboard?—The German limit is exceedingly small.

2184. Seven inches?—I have a copy here of the Geestemünde statistics which are almost exclusively steam-trawler statistics, and they show that the landings of small plaice are very large compared with the landings of medium size and large plaice. We have been verbally

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informed by Dr. Henking, who elaborates and works up these statistics for the German Sea Fisheries Association, that the number of small plaice landed at Geestemünde is exceedingly small, and I am quite satisfied that that is the case—that is, of fish below eight inches.

2185. Do you think they have not been caught?—No, they must have been caught, because we know from our investigation of the grounds that the small fish are all there. I have here a copy of a translation of a paper of Dr. Henking on the Geestemünde statistics; that is to say, of the German steam trawler fisheries. (*Vide Appendix .*) I have taken certain extracts from this paper of Dr. Henking in which he refers specifically to that point, and I can quote at this stage some remarks on this matter. He says on page 2 of this copy, "The annual replenishment of the stock of ground fishes in the North Sea, from the point of view of marketable produce, must be regarded as insufficient according to the data at present available, inasmuch as the general proceeds are falling off. The notion of what is marketable and what unmarketable changes in the course of time. Already many species of fish are brought to market in large quantities and sold which only a few years ago would have received no attention, *e.g.*, many species of skate and ray. The smaller fishes now also realise better than formerly. As the maximum size of fishes is attained with increasing rarity, the market acquires a tendency to lower the minimum size of the marketable species. In England this, as is well known, has given rise to the lively complaints which have been raised against the destruction of under-sized fish, especially flat fishes, and which have already led several times to the formulation of definite legislative proposals." Then he goes on to say (this is the point):—"Among us in Germany there are no market transactions in such under-sized fish, on which account the statistics furnish no material for a numerical determination of their quantities. On that point, as to what proportion of the part of the catch thrown overboard by the fishermen consists in small unmarketable material, nothing accurate is known. To ascertain that ought to provide a commendable task for the proposed international investigations in the interests of the sea fisheries." The only remark that I have to make upon this statement of Dr. Henking is that it is based on the steam trawler statistics, and there is a fleet of something like 300 German smacks fishing always on those nursery grounds south of Horn Reef, and owing to the fact that the small fish are there in such enormous preponderance, they must catch an enormous number of these very little fishes.

2186. For which there is no market?—I do not know what becomes of them. These steam trawler statistics are not enough to prove to us that they are not landed.

2187. What can become of them except to be thrown overboard; can you suggest any other possible means of disposing of them?—There are two markets—these are the Geestemünde

Chairman—continued.

statistics, and there is another market, Hamburg-Altona; I have not seen the statistics of that market. But these smacks land their fishes mostly up the Elbe at Hamburg-Altona, and I think it probable they land a considerable amount of small plaice there; but I do not know. I think the redeeming feature of this matter is, that the matter is now under investigation by the German authorities, and in a short time, no doubt, they will communicate the first results of their enquiries.

2188. But in any case they cannot sell plaice under seven inches in Germany, can they?—I think the German limit is lower than that, if I remember rightly.

2189. 7·1 it is on the northern ports. Then I assume that if they cannot sell them they throw them overboard?—I do not know what the practice is in Germany, but we do know that in some countries there are size limits on paper, but they are not really enforced. Whether that is the case in Germany or not I cannot say. It all depends, not on the regulations in the Act of Parliament, but on whether the authorities really enforce them.

Lord Tweedmouth

2190. Do you know if the Denmark limit is in force: it is a very high one?—That is enforced very stringently indeed; it is very effectively done.

Duke of Abercorn.

2191. They are bound to throw them over?—The point is that in Denmark there is no trawl fishing: it is all done by means of seines; and a size limit of 10 inches is stringently enforced by gun boats and torpedo boats always moving about among these vessels.

Chairman.

2192. Is it not the fact that the German sailing trawlers that you were alluding to just now, practically fish the estuaries of the great rivers, the Elbe and the Weser, and they do not go on to the fishing grounds?—They do fish in the mouths of the Elbe and the Weser, I admit, but these statistics that I have submitted here from the Danish official Reports show also that the German sailing trawlers fish to a large extent on the Horn Reef grounds.

2193. Is this lightship where these observations were taken, north of Heligoland?—Yes, it is just west of Esbjerg. In the Danish reports there are the fullest indications from year to year as to the enormous number of German sailing trawlers fishing side by side with Danish seiners. Often as many as one hundred at a time are lying off Esbjerg Harbour.

2194. But assuming for the moment that the German trawlers do throw overboard fish which are too small for them to land, and that a size limit were imposed by this Bill, do not you think that then at any rate the fish under seven inches or under eight inches would many of them survive to grow larger?—In the case of smacks there is a considerable probability that a fair proportion of small fish would survive; but

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in the case of steam trawlers I do not believe a large proportion would survive.

2195. Have you any opinion as to the vitality of plaice?—These details are down in our programme for the present year. We have not any figures to show you on this point at the present time. Last year our investigation was devoted to the preliminary survey of the whole of the North Sea and the extent of the area is so large that we could not enter upon these special investigations in the first year.

2196. You have not made any experiments which would lead you to challenge the evidence given to the Committee that plaice has considerable vitality?—My experience is of a general character; it is not statistically compiled, but my experience is, that in order to make sure of plaice being in healthy condition for marking experiments, we have to trawl for a very short time, not more than an hour, and at once to put these fishes into tanks of water; otherwise if they are left on deck for half an hour their vitality is very considerably impaired, and our experiments rendered useless unless we take these precautions. I think that every one familiar with the practice on board trawlers must feel convinced that whatever regulations are imposed, the fishermen themselves will not devote their first attention to liberating the small fish and throwing them overboard; they will go on with cleaning the net and sorting and gutting the fish before they attend to these little fishes; and the consequence is that a large proportion of the fishes must die before they are thrown overboard.

2197. If you were told that a plaice had lived for 10 hours out of water, would you be inclined to doubt the veracity of the statement?—It would depend, to some extent, on the size, and to some extent on the condition in which it was caught, and to some extent on the conditions in which it was lying on the deck. If it was kept in a damp place, with water on the deck, and in no great heat and no bright sun, I should not doubt that plaice could live for 10 hours out of water.

2198. You would like to give the Committee some information, I think, as to the work which the Marine Biological Association is doing in collecting statistics and so forth. I understand you have done little and you are not able to give any very decided opinion from such experiments as have been already made. I think you said so just now, did you not?—I am aware that when this Bill was introduced in your Lordships' House, you made some remarks about the small amount of work my Association had done in determining the size of fish on the fishing grounds; but I think this remark must have been due to some misapprehension, because the bulk of our time during the last year and a half has been devoted to this very point. Our vessel the "Huxley," a converted steam trawler, has been persistently engaged in the North Sea and fishing different parts to determine this special point. We were not charged with any responsibility for making any market observations of fish landed by vessels, and so far as responsibility

Chairman—continued.

was conferred upon us I submit that we have accumulated a vast mass of useful matter. I have here copies of our records, but, unless any special point arises, I suppose your Lordships do not wish to go into the actual amount; but I will submit to the Committee, as to the matter of fact, the Report of the International Committee on Over-fishing of which I was convener.

2199. Is this the one that went to Hamburg the other day?—That was the meeting held at Amsterdam before Hamburg. The meeting of the Committee dealt with the over-fishing problem, and the Report of this Committee contains a tabular statement of the number of hauls of the trawl made by the different participating countries; and your Lordship will observe that, so far as work at sea is concerned our English vessel has in each quarter of the year carried out more trawling work in the North Sea than any other vessel engaged in these investigations. We have obtained the records of some 200 hauls of the trawl; every fish has been measured—we have these tabulated out—and they are almost ready for the press; and the report about these things is upon the point of being issued.

2200. Have you taken any steps to ascertain the number of fish landed and their size and where they came from?—No. As I said, these matters were never referred to us; no responsibility was placed upon my Association in connection with statistics of market observations.

2201. Upon whom was it placed?—I understand it was reserved for the Government Department. After the Stockholm Conference in 1899, a Departmental Committee was appointed for dealing with Fishery Statistics and matters of that kind.

2202. The Ichthyological Committee?—No, the Statistical Committee; and the terms of reference to that Committee were "To enquire into the present system of collecting fishery statistics in England and Wales, and to report how the system could be improved and extended, and what additional cost (if any) would be entailed thereby, having special regard to the opinion expressed by the Select Committee of the House of Commons on Sea Fisheries, 1893, and the proposals of the Stockholm Conference, 1899." In other words, here was a Departmental Committee appointed for the express purpose of determining on the one hand to what extent His Majesty's Government were prepared to increase the statistical material, and on the other to spend additional money on more statistical evidence for the purpose of the International enquiries.

2203. Do you know how much money has been expended?—I am sorry to understand that the recommendations of the Statistical Committee were not granted in full.

2204. How much money have the Government given to the Marine Biological Association?—The Marine Biological Association receives, I think, some £5,500 a year for the sea work.

2205. That is out of the sum set apart for the purposes of international investigation is it not?—I cannot say. I am not in the secrets of the matter. The statistical part you see has already been

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been separated off from the work at sea. Consequently it was this Statistical Committee, as I understand it, which was expressly authorised to provide an estimate for statistical and market observations.

2206. But out of the money which is allotted for this purpose, is any given to anybody except your Association and the Scottish Fishery Board?—I think not, but I do not know.

2207. Then can anybody collect these statistics except your Association and the Scottish Fishery Board?—If I understand the matter rightly, my Association was never intended to collect statistics; it was never asked to collect statistics. There was a demarcation drawn. Unfortunately there seems to have been to some extent a confusion; but we have evidence from this report, and other material, that His Majesty's Government reserved to the Fisheries Department statistical questions, and commissioned the Marine Biological Association to undertake the work at sea, and they accepted an estimate that was drawn up by myself, as representing the Association, for that part of the work.

2208. And who was to undertake the statistical work?—The statistics are definitely placed, by Act of Parliament I believe, in the hands of the Fishery Department.

2209. Are you aware that the Council at Hamburg passed a resolution. Are you aware of the terms of that resolution?—I have not them here. I was present at the meeting and remember the terms of the resolution. I think it was a very estimable one because these statistical observations upon the market are of great importance; and the whole international programme was intended to be the combination of biological observations at sea with market observations and statistics collected ashore.

2210. Do you think that the money expended in these enquiries would be better spent in obtaining these market observations than upon the scientific investigations that your Society has undertaken?—No, I cannot at all agree to that. I think it is a matter of great importance that investigations should be carried out on the fishing grounds themselves. Market observations are very good in their way. They give a record of what is landed by fishermen, but not of what is caught; and only observations carried out at sea by means of fishing boats and ordinary fishing nets can, in my opinion, provide that necessary information.

2211. Why do you say that it cannot be given by the fishermen themselves?—It is voluntary information which has not authority, being given by men who are themselves demanding legislation. I do not for a moment wish to impugn their veracity, but there is no sufficient guarantee as to the accuracy of their observations.

2212. Do not they keep a log?—Yes, I suppose in some cases.

2213. Would not the observations in the log of the catch of the fish be conclusive proof as to where the fish was caught and what the nature of the fish was?—Yes; naturally so far as they give observations they are of very great value, but it is not within the province of fisher-

Chairman—continued.

men to measure the fishes with the accuracy of detail that a special staff is able to devote to the matter. We measure every fish exactly.

2214. Could they not be measured on landing?—They could be measured on landing, but then the catches are mixed and you do not know what has been thrown overboard.

2215. Do you wish to say anything further about these operations?—I should like to draw the attention of the Committee to one branch of work we have been doing. We have been marking, in accordance with the International programme, a number of plaice and other fishes with labels to determine their wanderings.

2216. And turned them loose?—And turned them loose. This chart, which I am afraid is on somewhat a small scale, represents the southern part of the North Sea which would be fished over by the Lowestoft smacks.

2217. Will you kindly point to Heligoland?—I am afraid it does not go far enough north. The fact is that the Heligoland region does not fall within the English part of the investigations. This represents our English observations.

2218. That is where the Lowestoft people mostly fish?—Yes.

2219. The Grimsby and Hull vessels rarely go there?—Very rarely except to the most northern part of it. I merely show a few results. In December 1902 we marked 150 small plaice north of Holland (pointing to the chart). The first of those plaice was recovered here six weeks later, in January, after travelling 150 miles; and all along the line from there to here, during the next two months, specimens of that original batch were found along the line of route. We had some reason to think about March that the fish had stopped making this southward migration, and were going north again, so we marked fishes here in March, and this hypothesis was verified, because the catches from this batch were now met with to the north; that is to say, in the spring we found from these experiments that the plaice were moving northwards, and they moved up as far as the Cromer Banks, the Lemon Ground, in the course of a few months. We then marked them on the Lemon ground in April and May, and found that during the summer months the fish radiated round about in the same region.

2220. Up till when?—During July, August, and September, those were about the months. But later on, a few of these did migrate further north. For example, in January of the present year one was found right away to the north off the coast of Yorkshire.

Marquis of Huntly.

2221. When was it marked?—In the spring of last year—May; that is to say, nine months later it was found off Yorkshire.

2222. Had it increased in size?—I have not got my records here, but we have tabulated the increase in size of all the fishes.

Chairman.

2223. What is the general result?—The general result is that a fish, say, of about 8 inches

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8 inches, would grow about $2\frac{1}{2}$ to 3 inches in one year; but the greater part of this growth takes place almost the entire part of it, between March and October; in the winter months they scarcely grow at all. I further wish to say that, since it might be objected that these experiments are not sufficiently numerous to draw conclusions from, we repeated the experiments again last autumn—September to November—and the same migration was again demonstrated; so we draw the conclusion that in the southern part of the sea, where the Lowestoft smacks fish, there is a regular migration during the seasons. This is a preliminary conclusion; it may be modified later on to some extent, but in general that appears to be the main conclusion. This is of great importance, because the small fish grounds for this area are along the Dutch coast, and we have very few small plaice relatively on the English coast—the great abundance of small plaice is on the Dutch coast; and by demonstrating this migration we are able to show that the Dutch coasts are really the nursery for the whole of this area. Then there is a regular migration as the fish get larger.

2224. Have you any knowledge at all what the Germans have been doing on the eastern grounds?—I have a general knowledge, because as organising secretary of the Over-fishing Committee in the past they send their reports to me, and a report is being prepared at the present time which will give the results.

2225. Are the movements of plaice on those grounds analogous?—The migration experiments of the Danes and Germans have not reached me in detail, but I know that they have made a great number of experiments all down the German and Danish coasts, and I know from some of the captures which our English fishermen have made, that there must have been very considerable migration; but I cannot speak as to results; I only know that the work is in progress.

Marquess of Huntly.

2226. Have you heard of whether any marked plaice have been caught beyond that area?—Yes, off the Yorkshire coast, and one even in St Andrew's Bay; but that was marked further north off the Yorkshire coast itself.

2227. But the limit of migration is about 150 miles?—It appears to be so.

Chairman.

2228. Can you say at all what proportion of the fish that have been marked have been recaptured?—Yes, that was a point I wished to state to the Committee. We found, both the Danish investigators and ourselves, that about 30 per cent. of the plaice living on the fishing grounds were caught by fishermen on the grounds in one year.

2229. That does not show that many escaped?—No, it shows that the fishing is very intense indeed, and it confirms the general view of the results drawn from statistical observations. There is one further point that I should like to communicate, and that is the effect of

Chairman—continued.

density of population on the rate of growth of the fish. I have here some charts which show the abundance of fish on the different fishing grounds as determined by our own catches. We count and measure every fish we catch with our otter or beam trawl, and these have been all calculated out into the number of fish caught per hour, with the different sizes, and on these charts the results have been put down for me for the different seasons of the year. (*Handing in the same.*) On the Horn Reef grounds, which are the chief nursery, of course, under consideration, we obtain an average abundance of plaice in the spring months, that is to say, from April to June, of something like 1,300 plaice below 12 inches in length, as compared with only two plaice above that limit for one hour's fishing. Later on in the season the abundance decreases down to only a couple of hundred small plaice per hour.

2230. How many large?—The number of large is so small that I cannot attach much value to the figures. I have two figures here. The beam trawl reports show four large fish per hour and the otter trawl only one; but those investigations are on slightly different grounds; it is between only one and four per hour.

2231. I am not quite sure that I know which grounds these are; are they round Heligoland or the grounds you were showing on one of the larger charts?—No; north of Heligoland, the grounds marked yellow on the chart behind your Lordship. Such a colossal abundance of fish is not found anywhere else in our experience in the whole of the North Sea, and it is only approached very remotely on the Dutch coast, which furnish the nursery for the southern grounds, of course. But we have investigated the rate of growth on those grounds, and find a very distinct difference; that is to say, where the small fish are very densely crowded, they grow at a very small rate compared with their rate of growth on other less crowded grounds. The consequence is, that one must bear in mind the possible consequence of interfering with the fishing as at present carried on on those grounds; that supposing the size limit diminishes the intensity of fishing on the Horn Reef Nurseries, one indirect result will be to increase the density of fish there and thereby still further to arrest the rate of growth.

2232. But how do you make that tally with your observations that they migrate?—These experiments here show that the small plaice below eight inches do not migrate; the migrations are limited to fish above eight inches; it is the larger fishes that make the long migrations; the small fishes remain stationary *in situ*.

2233. But your observations have not extended over a whole year?—Yes, a year and a half.

2234. Do you think that in a year and a half those small fishes under eight inches do not leave those grounds?—When the small fish have grown to a larger size then they migrate; but until they attain the size of about eight inches they appear not to migrate to any distance from their place of origin.

2235. But

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2235. But if they were not caught you think they would not grow beyond eight inches on those grounds?—No; I say they would grow at a smaller rate with a diminished fishing than they would with intense fishing, because the density will be increased.

2236. But ultimately if they were not caught they would move off those grounds.—Yes. The only practical point that comes out of that is, that by diminishing the rate of growth the time they sojourn on the nurseries will be increased, they will remain longer on the grounds, and therefore the chances of their capture by other boats, German and Danish, will be increased.

Lord Tweedmouth.

2237. Do not you think the change of temperature has anything to do with their migration from these shallow grounds?—It would appear to do so very largely, and I think it is so. To prove what the migration is due to is a matter of a few years, but we certainly feel that it is connected with temperature and other conditions, such as salinity.

2238. My point is that it is during the summer months that these grounds are found crowded with these small fish at the present time?—Yes.

2239. Supposing they were not caught, do you think they would remain on there during the winter months?—I think it is perfectly certain that the fish above 8 or 9 inches would migrate. It is only the very small ones that would remain there.

2240. There would be a very considerable difference in the temperature of that shallow water there in winter?—Yes, a considerable difference. It is very cold along that coast in winter time, in fact the shores are occasionally covered with ice. Undoubtedly that would affect them.

2241. Do not you think that it would drive the fish out of the grounds?—The fact is they cannot be found in the deep water. The very small fish no doubt remain there, but the larger fish, about eight or nine inches, do migrate out into somewhat deeper water. We can prove that from the increase in the average catch of the vessels off shore with the progress of the seasons: in the autumn the abundance of moderate-sized fish in the nurseries has been reduced, while the abundance of the smaller sizes of fish off the shore has increased. There is no doubt they do migrate.

Chairman.

2242. Do you think, supposing any measures were taken which prevented vessels going there to fish in the summer months, the fish would remain there and might be caught by this same vessel later on in the year?—Not the fish in which we are most interested, the fish above eight inches; but I think the small fishes, that is, below eight inches and about eight inches, would be submitted to increased risk of capture by local boats, because they would grow more slowly.

2243. After all the eight inch fish are only one inch above prohibited minimum of foreign (0.10.)

Chairman—continued.

vessels?—Yes, I have been looking at it from the point of view of the fishes rather; I am thinking that the destruction of very small fishes is just as important as the destruction of very big fishes, and I am thinking of the efficacy of this measure to arrest the destruction of fish at all stages of growth. That is all I think I need say in connection with the work. I have merely submitted an example of the kind of work on which we are engaged; and the only other point that I would like to offer some remarks upon is in connection with the prospects of international regulation arising out of these investigations.

Marquess of Huntly.

2244. Did you examine any other fish except plaice?—Yes. We measure every fish; we have marked soles.

Duke of Abercorn.

2245. Have you any records of the soles?—Yes. Every fish caught by the trawl is measured, and the results are tabulated out on large sheets. I have here a sheet which shows, for example, the sizes and the number of fish of each size for the same species caught at each haul of the trawl. This is plaice in June on a certain fishing ground. The total number is 16, and the different sizes are in centimetres—if you take $2\frac{1}{2}$ to the inch it comes to the same thing. For every haul of the trawl we give the exact numbers of different sizes, and thus can tell at a glance what is the general size of the fish on a given fishing ground.

2246. These are all plaice?—Yes.

2247. Do soles migrate as freely as plaice?—Yes; we have not marked the soles to anything like the same extent, but we have marked a certain number of soles caught in the Wash, and some of them are now beginning to be caught again; one was caught quite lately which had travelled a very considerable distance, in fact it will not come into the chart. We marked 39 soles in the Wash in August, and one was caught in February quite lately in latitude $54^{\circ} 26'$ that is just about the top of the paper in the north part of the Yorkshire coast. That shows that the sole is capable of very extensive migration; and I know the Dutch naturalists who began to mark soles before we did, have also demonstrated the same point—that the sole is the subject of very considerable migration.

Chairman.

2248. Can you tell us what is the total number of fish you have caught and measured?—I forget at the present time; I think it is 150,000, or something like that.

2249. And do you know how many altogether were marked?—We have not marked 150,000.

2250. Can you say how many were marked and turned out again?—I think we have marked about 1,500 fishes.

2251. And of those 31 per cent. have been recaptured?—30 per cent. have been recovered within the year; that is to say, those experiments which have lasted a year have yield an average of something like 30 per cent. and the same

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same result, as is shown in that Report of Committee B at Amsterdam, was obtained by the Danish naturalists; they found the same intensity of fishing on the Danish coast.

Marquess of Abercorn.

2252. What mark do you put upon it?—Quite a thin brass label, turned up at the edge to prevent the edge cutting into the skin, and fastened to the upper edge of the body by a short silver wire, with a bone button underneath. If *this* represents the fish we make a small hole with an instrument, just like making a hole in a woman's ear for an earring, and put a piece of silver wire through, with a bone button underneath and a little brass numbered disc on the top; the wire is turned down and the fish thrown overboard.

Chairman.

2253. Then you offer a reward?—Yes, we offer a reward and notice is advertised in the fishermen's almanacks and elsewhere, and we think not many have escaped us.

2254. I suppose you average the sizes, do you not, according to the numbers that you catch?—We average the sizes. We mark small fishes, and sometimes we mark large fishes. This result that I am giving you is based on a preponderance of small fish.

2255. On what numbers do you base the averages of the different sizes; is it on all fish caught? When you say so many over or under twelve inches, on what is that based?—Those are not averages; those are actual observations for each haul of the trawl, if I remember rightly. I have two sets of charts; on one the actual observations are tabulated, and on the other the mean observations. Certainly in one year the means are based on a small number of hauls.

2256. You were proceeding to say something about the idea of an international agreement?—Yes, the reason I wished to bring this forward is because I believe there is some considerable misapprehension in regard to the views of the German authorities as regards the desirability of legislation. I believe this has been mentioned in evidence before the Committee. I remember a few years ago the point was also raised that the German authorities are averse to any restrictive regulations upon their fisheries, and a reference was made to the remarks of President Herwig, the President of the German Sea Fisheries Association, at the conference, I think it was at Bremen, some 10 or 15 years ago, in which he expressed the prevalent views in Germany, that their chief desire was to develop their trawling fleets, and that they were not prepared to consider restrictive legislation which would in any way impede them from developing those fleets. I merely wish to draw the attention of the Committee to the fact that those remarks were made at a time when the German trawling fleet was in its infancy, and before they had had much experience of trawling.

2257. What date was that?—I forget. I think it was in 1890. Of course during that time they

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were very active building steam trawlers, and they have now about 130. They had not then experienced what has been experienced in England; that is to say, this progressive decline in the average catch owing to the great multiplication of vessels. I therefore wish to draw attention to the views of the Germans, as modified by recent experience. In the sheets which I have already submitted to your Lordship, dealing with Professor Henking's paper, I have translated some remarks of his which were based on an analysis of the statistics of the landings of German steam trawlers for a term of years. I have the original paper here, but the extracts which I have before me I think are sufficient for my purpose. Doctor Henking, in the first place, is referring to a paper of my own published in the previous year, which was entitled "The Impoverishment of the Sea," in which I dealt with the statistical aspects of this problem; and with regard to that paper he goes on to say: "Concerning the results of the trawl fishery of Great Britain, it can no longer be doubted that a constant diminution in the products of the fishery in question has taken place during the last decade"; and then he goes on to say: "The results of the Geestemünde statistics render it possible to corroborate this observation of a fall in the catch. We obtain the following averages for the five years available for consideration"; and your Lordship will observe that he gives there a series of figures showing what is the average catch per day of the German steam trawlers for a term of five years. In 1893 the average catch was 1,978 lbs. per day; in 1894, 2,252 lbs.; and then from that year onwards it steadily decreased. In 1895 it was 2,225 lbs.; in 1896, 1,914 lbs.; and in 1897, 1,641 lbs.

2258. That is, I suppose, from vessels fishing practically on the same grounds from year to year?—The fishing grounds are described in a chart in the paper.

2259. I mean that those fishing grounds have not extended in the way that our trawlers have extended theirs?—Yes; he admits that steam trawlers are incessantly tending to go further and further north. But these figures are figures for the North Sea fishing grounds alone; they do not include any Iceland catches. So that the observations are very pertinent; they show that in 1900 the Germans for the first time experienced the fact that the catches of steam trawlers were going down from year to year. And thus Dr. Henking, who occupies a very responsible position in Germany in connection with the German Sea Fisheries Association, goes on to say: "The reduction in the catch has continued constantly since 1894, in spite of the fact that a very substantial increase in the catching power took place during 1895 and 1896, when the otter-trawl was brought into use on steam trawlers." He continues: "Although for definite reasons I would prefer to avoid the expression 'over-fishing,' nevertheless there can be no doubt that the rapid diminution in the amount of the catch constitutes a serious danger and deserves the most careful consideration." He underlines the words "serious danger." He then goes on to draw

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draw certain practical conclusions from the examination of those statistics, and I would ask your Lordship to observe the nature of those conclusions. He says in the second place: "There must be a sufficient replenishment (*i.e.*, by immigration or growth) to balance the quantity of marketable produce annually fished out." These are certain general propositions; and, thirdly, he continues: "The number of steamers or other fishing vessels ought not to exceed a certain maximum." He then proceeds to say: "An indication that the number of steamers in the North Sea has already exceeded the critical point can be recognised in the fact that the steamers disperse in ever increasing numbers toward the more distant and less fished regions"; and then he concludes also that the annual replenishment of the stock of ground fishes in the North Sea under present conditions is not keeping pace with the quantity of fish taken out of the sea. In other words, we have in this paper of Dr. Henking a statement of the German views based upon recent experiences of their own fishing, and I submit that those views materially alter the prospects of German co-operation in international legislation. They are themselves confronted now with the same danger that our English fishermen are confronted with. They see from their own figures that the catches of their own steam trawlers are going down from year to year, and of course the price of fish cannot indefinitely go up to compensate. They are, therefore confronted with a grave practical problem. I believe, and I know from conversation with them, that they are very anxious to have an exhaustive inquiry into the situation as regards the fisheries, and I believe that in spite of their original desire not to impede the growth of their own fleets, they now recognise both the fact that the growth of their fleets indefinitely is impossible and that it is to their own interest to find out in what way the stock of fish in the sea can be increased.

2260. But presumably they would desire that England, which has by far the largest number of vessels, should take some steps to protect the fish?—I think their view is that they do not believe in what I may call experimental legislation. They believe in an inquiry beforehand; they want to have the facts put in a clear way, so that they may know what are the dangers confronting them and what possible remedies can be devised.

2261. Do you think that their ideas are in the direction of limiting the total number of vessels fishing in the North Sea?—This clearly indicates that they recognise the fact that the development of vessels indefinitely cannot be continued; but at the same time that is a matter which would remedy itself. There is no need to artificially limit the number of boats. The boats sooner or later will stop growing in numbers when the fishing ceases to pay.

2262. Are you aware that the Council passed a resolution upon this subject the other day at Hamburg?—Having regard to this Bill?

2263. "That it is desirable that in the event of a law being passed in Great Britain giving powers to make experiments for restricting the

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destruction of undersized fish, powers be also taken by the various Governments concerned to make experiments for restricting the destruction of undersized flat fish"; that would be in accordance with the general idea which you were giving us just now?—I do not know whether I am entitled to speak on this point as I was not a Commissioner at that meeting. I would ask your Lordship whether I should express my own recollection as to the general view which prevailed at the time when that resolution was put forward?

2264. If you please?—There was some discussion at the time when that proposal was before the Council, and the Dutch and Belgian representatives could not understand the terms of the resolution. The resolution, if I remember rightly, spoke of Great Britain obtaining power to make experiments for the prevention of the destruction of immature fish?

2265. Quite right?—I remember that Professor Max Weber, one of the Dutch representatives, got up and asked whether the English Government required to pass laws in order to make experiments. Of course he confused between what we understand as legislative experiments and what we may call scientific trawling experiments. I must say that I think the resolution was passed under some misapprehension. I know that the general feeling is in favour of enquiry—a comprehensive enquiry, and I believe that they all agree that if the destruction of undersized flat fish can be proved scientifically and statistically to be injurious to the development of the fishery, they will be prepared to consider on their merits any proposals for regulating the fisheries internationally.

2266. But how would it be possible for us to restrict the destruction of undersized fish except by legislation?—There is no other way. But there are two ways of doing that; either to do it by national legislation pure and simple, which only touches the fringe of the problem, and in many ways has objections to it; or there is the international way; and my point is that I feel quite confident that if these investigations are carried out fully and completely the foreigners, the Germans and the Dutch, in spite of their prepossession against restrictive legislation, will be fully prepared to join with all the other countries in effective national legislation when the necessity has been clearly proved.

2267. I want to draw your attention with regard to that resolution, to the fact that it was distinctly stated in the resolution that "it is desirable that in the event of a law being passed in Great Britain, giving power to make experiments for restricting the destruction of undersized fish" and so on. Therefore it seems to me difficult to see how they could have had any misunderstanding on that point, because it expressly says "in the event of a law being passed?"—And that gave rise to Professor Weber's question, "Does Great Britain require a law to enable it to make experiments?" The whole explanation of that question was, that he was under some confusion as to the nature of the experiments which the resolution meant.

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He thought it meant trawling experiments at sea.

2268. But, as I put it to you just now, is it possible to experiment in the direction of the restriction of the capture of undersized flat fish except by legislation?—It is possible to state the case beforehand and to examine the circumstances so minutely that the efficacy of the proposals can be rendered probable or improbable from an examination of the evidence beforehand.

2269. In fact, although you admit that the number of fish in the sea is falling off, if not in numbers, at any rate in size, you would like to wait until a very long series of experiments has been conducted before taking any active steps?—No, I should not like to have it put in that form. At the present time it is only one year since our investigations were started, and therefore that renders it difficult for us to express any opinion, but in a year or two more, when not only our own investigations, but the investigations of our colleagues round the North Sea are available, then I think we shall be far better able to judge of the efficacy of a general measure for the whole of the North Sea.

2270. But are you aware that with the comparatively insignificant sum of money which the Board of Agriculture and Fisheries have at their disposal as compared with the amount which has been given for international inquiries, a very large number of fish have been examined and tabulated, and considerable light has been thrown upon the subject by the statistics obtained?—I think when those statistics are published they will be of great value, and I hope that the system of market measurements under the Board will be greatly developed, and if funds are not available perhaps this Committee will be able to bring pressure to bear upon the Treasury to grant further sums.

2271. Do not you think that the results which have been obtained already go to show that this restrictive legislation is necessary and immediately necessary?—The statistics, I believe, have not been published, and I do not know anything about them.

2272. They have been given in evidence before this Committee.

After a short adjournment.

Duke of Abercorn.

2273. I think you said in the beginning of your evidence this morning that you were not afraid of the depletion of fish in the North Sea—that there was no evidence to show that the fish were becoming scarcer in the North Sea, and that it was owing not to the diminution of fish, but to the area being the same and a larger number of vessels coming, and that they caught individually a smaller catch than they used formerly to do per vessel?—I wish to carefully guard myself from appearing to express a belief that there has been no depletion of fish in the North Sea. My opinion is rather that there has been a depletion, that is to say, a reduced abundance of fish on the grounds; but my only point is that hitherto the evidence of that impoverishment has been based on the decline in the

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average catches of fishing boats, because the total statistics of fish landed in this country for example have been hitherto vitiated by a mixture of fish from different grounds; that is to say, the fish landed from the North Sea proper, for example, have been mixed up with the fish landed from, say, Iceland. Consequently the general increase in the landings of fish on our coast are not a proof of the maintenance of the abundance of fish in the North Sea itself. The only evidence therefore that could be adduced was the evidence of individual fishing boats, or the average catch per boat, and that has been undermined by the demonstration that the intensity of fishing is now so great that the catch of any individual boat may be affected by the number of boats fishing simultaneously. I merely mean that there is an inadequacy in the evidence; the evidence is not conclusive, and we have to go by indirect means.

2274. Then I imagine that the number of steam trawlers is increasing year by year?—I do not know whether the increase is being maintained now at the same rate, but it has steadily increased during the last 10 or 20 years.

2275. If it is increasing and if the area of the capture of the fish is the same, the conclusion is that the catches each year by the various trawlers will become less?—Yes.

2276. Are you in favour of this Bill; I gather from your evidence that you would rather have it deferred for another two years so that a little more research in your department might be carried out?—It seems to me that the Bill is one on which a biologist is placed at a disadvantage in giving evidence, because it does not specify any definite limits on which his advice may be asked; it merely asks that absolute power shall be given to the Board of Agriculture and Fisheries for doing what they think proper within certain wide limits in connection with the matter, and it is a matter therefore on which the representatives of the trade concerned can better express a definite opinion for or against the Bill. My evidence as a biologist is directed rather to the consideration of whether legislation by national size limits, as opposed to international legislation, is effective or not; and the second and minor point, whether it is desirable to adopt a different size limit for, say, the steam trawlers from what should be adopted for the smacks. Without wishing to express an opinion as to whether these full powers should be given to the Board or not, I wish to offer evidence that while the imposition of size limits on steam trawlers may have some good effect in stopping the destruction of small fish, it will not have anything like the same effect as would an international limit on the same vessels. Secondly, I suggest that the imposition of size limits on smacks would do no good whatever. That is my position. I draw a distinction between steamers and smacks, owing to the fact that the number of foreign smacks and steam trawlers fishing on the Dutch nurseries is so great that the mere stopping of our English smacks fishing there would do no real good in stopping the total destruction.

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destruction. Therefore, when your Lordship asks me whether I am in favour of the Bill as a Bill, all I can say is that I am in favour more from diplomatic considerations than from any conviction as to the efficacy of the measures proposed. Nevertheless, I am in favour of a restriction being placed on the capture of small fish by steamers. But at the present stage I am against the imposition of any limits on the landings of the smacks, because as I say, so far as I am acquainted with the evidence, the limits would do no good in the case of the smacks; and of course no one desires to unnecessarily cripple a particular industry.

2277. Then if this Bill became law and the restriction of landing of undersized fish were imposed in England, and therefore it was unprofitable for the English trawlers to go to what they call the Eastern waters, I think from what you have already stated you are of opinion that their place would be supplanted by foreigners to a great extent?—Yes, to a large extent.

2278. And, therefore, what we wish to obviate now would not take place as regards the protection of this small class of fish?—No; the destruction would be mitigated perhaps, but it would not be done away with.

2279. I think you said that it is not advisable that any breeding ground should be overstocked with small fish, that they do not increase in the same proportion as a limited number would, and therefore that they do not go down to deeper waters when they become of a greater size?—Yes. I do not want too much importance to be attached to that branch of my evidence, because I adduced it for quite a side issue, and it bears very slightly on the general question. All we know is that if the density of fish is great the rate of growth is less than upon more sparsely populated grounds; and it is rather a matter for further inquiry than a basis for consideration at the present time.

2280. But if there was an international agreement, what countries, in your opinion, would join in that agreement?—I am not authorised, naturally, to speak for other countries, but we know that Denmark, which has an effective limit at the present time, is very anxious to preserve that measure of protection. But in looking at the last report of the Danish authorities* one finds how seriously they feel that the absence of restrictions on the German and English vessels is really paralysing their own efforts to save the fish. The absence of restrictions on the English and German vessels on the Danish grounds is rendering the situation in Denmark itself so critical that the fishermen are agitating for the removal of the size limits at present in force there.

2281. And is the same thing taking place in Germany?—All I can say is that I believe the Germans, and I may also say the Dutch will be perfectly willing to consider and even to propose regulations of a restrictive character when it has been demonstrated in a clear way that the destruction of small fish by their own or other vessels is now being carried to such an extent as to be to their own disadvantage. When it has been

Duke of Abercorn—continued.

proved that it will be to their own advantage, the advantage of their own fisheries, to have restriction, then I believe they will be thoroughly prepared to join in; and I have adduced evidence, at any rate on behalf of Germany, to show that they are face to face with just the same problem as we are in England, this declining yield per boat, and therefore have the same interest as ourselves in bringing about an international arrangement. More than that I cannot say.

2282. But would France be willing to join?—Unfortunately France is not concerned in these investigations and I can only speak generally for France. Some years ago before these North Sea investigations were under way, I had several occasions of meeting the French experts and talking with them, and I was informed that the low limits at present in force in France had already given them so much trouble that the local magistrates very rarely enforced them, and I do not think there is the same prospect of France joining in as there is of other countries; but I cannot say definitely.

Marquess of Huntly.

2283. But in any international agreement it would be necessary, of course, for France to be a party to it?—I think it certainly would be very desirable, but so far as the trawling steamers are concerned the French trawlers are not very numerous in the North Sea.

2284. I understood from you that the result of reducing the number of English trawlers going to the eastern grounds would be to perhaps increase the number of foreign trawlers, the French among them?—To increase the number of boats belonging to those countries advantageously situated; and if you take the case of the eastern grounds of the North Sea, the tendency would be to increase the catch of the German and Danish vessels, and therefore to encourage the development of those fleets, but not the French fleet, which is situated a long way away. At the present time I think the French trawlers do not visit these eastern grounds, or only to a small extent. They fish mostly in the Channel and to the westward.

2285. I should like to make one point quite clear about the Bill. Your own predilection is for an international agreement preceding a Bill, but if, as I understand, the Conference are very strongly in favour of England taking the precedence in this legislation, or, rather following Denmark in it, do you disapprove of an enabling Bill of this sort so as to set an example?—No, I draw a sharp distinction between approving the Bill as a diplomatic measure and approving the Bill as an effective means of stopping the destruction of fish. To promote the Bill in order to pave the way for international action is one thing which can be defended on quite different grounds; and I feel that it would be a distinct advantage to this country to pass some measure of restriction on the action of the steam trawlers on those eastern grounds. I think it would be likely to do some direct good, and also to

* Fiskeri-Beretning for Finansaaet, 1901-2, udarbejdet af C. F. Drechsel. Kjøbenhavn, 1903, pp 164-5.

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to do a large amount of diplomatic good; and in particular it would support the Danes who are at present making every effort to increase the stock of fish over there, whereas our trawlers and the German trawlers are practically paralysing their efforts; and I think if a Bill were to be passed on the part of England, which would really prevent our English trawlers from doing the damage that they are doing at present on the Eastern grounds, taking those grounds alone, it would be a benefit, and I am perfectly prepared to support it. But my view is—which has been a view set forth many years ago by the Royal Commission of 1866—that in the case of an industry like the fishing industry, which depends so much upon freedom for its development, and on absence of restrictions for rapid handling of the fish in the market, and so on, no restrictions ought to be imposed which have not been demonstrated to be necessary and advantageous; and therefore, as I consider no advantage has been demonstrated for restricting the catches of the smacks, I think the operation of any Bill should be limited to the steam trawlers at the present stage. Later on, if the facts come to show that the legislation would be usefully applicable to the smacks also, I should be prepared to support it then; but at the present stage it seems to me that we have no knowledge to show that any good would be done, and we have some knowledge to show that harm would be done.

2286. But in your view, taking the International situation, it is better to have a Bill which would enable the Board of Agriculture and Fisheries to vary their Order than to have a Bill that fixes a size limit in the Bill?—I confess my preferences would be for a definite limit to be assigned which we could consider on its merits simply, because as an investigator I do not know anything about what limits the Board would propose. I am looking, as a naturalist, at the question entirely from the point of view of the fish.

2287. But is it easier to bring your views before the Board of Agriculture and Fisheries than to bring them before Parliament and have another Bill passed?—I think it would be a distinct gain that the power should be in the hands of the Board rather than in the hands of Parliament, provided there was an understanding between those bodies concerned with sea investigations, and the Board; but it ought to be defined.

2288. Then naturally the Board would go to those who were scientifically following out these investigations; it is to them they would turn for help to decide this matter?—I should think it is exceedingly probable.

2289. Surely it would be a much more rapid way of dealing with the question by an enabling Bill of this sort which could be altered in the size limit, than to have a fixed limit in the Bill, that you would have to go to Parliament to get altered?—There are some difficulties. I do not want to raise any new points, but there is one point that I have omitted to mention. As I

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understand, the Board would only have power over England. I do not know if that is so.

Chairman.

2290. England and Wales?—Yes. Supposing the Scottish authorities adopted the same limits as the Board of Agriculture and Fisheries, of course it would be a very good thing; but what would happen in the event of the Scottish authorities fixing a lower limit for steam trawlers than the English authorities? Would not the result be that the Grimsby and Hull boats would land their fish in Scotland?

2291. You are examining me, but my answer to that would be that we are all one Government. My opinion is that the advantage of a general Act over an enabling Bill is that the limit would be imposed for the whole district, and would prevent the possibility of any difficulties of that character arising in future which at present cannot be foreseen.

2292. That is between the Board of Agriculture and Fisheries and the Scottish Fishery Board?—There is Aberdeen, a great port in which steam trawlers are landing fish in increasing quantities year by year; and there are Grimsby and Hull, where steam trawlers land. Up to the present the Scottish vessels have not been much concerned in the capture of these small fish, I believe; but the last Danish report gives an example of a steam trawler from Aberdeen fishing on those Horn Reef grounds and taking over the small fish to Aberdeen, where they were sold at 4s. to 10s. a box. That is the first record I am acquainted with of a Scottish vessel fishing there. There is a beginning. One can scarcely foresee what developments would take place supposing the English Department were to fix a limit, say, of 12 inches and the Scottish Department were to fix a limit of 8 inches. But it would be very probable, it seems to me, that a number of boats would take to landing small fish in Aberdeen, instead of in Grimsby and Billingsgate as at present; and therefore we should have a repetition of this terrible question of the Moray Firth.

Marquess of Huntly.

2293. I understand that the Scottish Office support the Bill?—I am looking at it from the point of view of general efficacy. Would a general Act not be better, because it would prevent the possibility of these tricks being resorted to?

2294. We have had evidence about a cargo of small fish being landed in Aberdeen, and one of the witnesses told us that if it was prevented from landing them they would take very good care not to bring them in—that they would not want to be fined a second time for bringing them in, they would throw them overboard?—Yes, if the limit was the same; but an 8 inch limit is ineffectual, whereas an 11 or 12 inch limit would be effectual.

2295. Do you think there would be any way of giving encouragement to the owners and crews of these trawlers to take care of the undersized fish and throw them overboard as soon as possible?—I think the only prospect of that is

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in what I may call the technical education of the fisherman in future. I think a good deal could be done if there were a number of technical institutes for training the fishermen in the chief fishing ports where the youngsters, the lads, could be taught these things, and shown practically by lectures, and so on, how important it is not to be wasteful in their methods, and in that way, gradually, without any legislation, a feeling of greater care might arise in the fishermen themselves. I do not see how it is possible to force them to be careful.

2296. Not to force them, but to encourage them by giving premiums?—There is a question as to funds then; it is so difficult to get money out of the Treasury for any purpose, that I should think they would find it difficult to give it for that.

Lord Tweedmouth.

2297. Am I right in assuming that your long experience of sea fisheries has caused you to form an opinion that there is a distinct depletion in the fish in the North Sea?—I have formed an opinion that there is a distinct depletion in general.

2298. And does that apply to all fish?—No, it applies to the more sedentary fishes—those fishes that live within the North Sea area itself and do not migrate out of it, especially to those fishes that can be caught by trawlers at all periods of the year in their younger as well as their older stages. Take the haddock and cod. There is a good deal of evidence to show that those fishes do not live in the North Sea the whole year round, they immigrate into the North Sea at certain periods and emigrate. Consequently the trawlers cannot fish them with the same intensity that they can flat fishes. But the evidence to my mind is satisfactory that there has been a distinct falling off in the abundance of flat fish, more particularly plaice and soles.

2299. Then do you include turbot and brill as well?—The statistics show that there has been a falling off in the abundance of turbot and brill, so far as one can rely upon statistics; but I have not studied those at all.

2300. At any rate you think the depletion of flat fish has been caused by the action of man?—Yes, I think it has.

2301. Then so far you differ from the opinion which Professor Huxley used to hold on that subject?—I have expressed my opinions. One naturally respects Professor Huxley's opinions and one would hesitate to go against him unless one had good grounds; but I have examined the evidence again in the light of new knowledge and I am compelled to differ from him in regard to the possibility of overfishing in the case of these flat fish.

2302. Does that apply to the stock of fish generally, what I may call the recuperative power of the sea, or only to the depletion in the larger fish?—I am inclined to think that the development of trawling has resulted in a decline of the recuperative power of the sea as regards the flat fishes in the North Sea, and to a less extent in regard to the round fishes. In regard to some fishes, herring, mackerel, I do

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not think man has had any influence whatever on the abundance of the fish; and therefore in regard to those species I agree with Professor Huxley. In regard to the flat fishes I think the situation has so profoundly changed since his time (the whole development of the steam trawler has been since his time, since he wrote and formed his opinions) that in regard to flat fish I am compelled to differ from him in that respect.

2303. You come to that conclusion after careful consideration. Now quite aside from this Bill or anything else, may I ask you—supposing you had imposed upon you the duty of proposing a method of remedying that state of affairs and filling up the depletion, what should you do?—I should first of all, for three or four years, make a very careful and profound inquiry into the life history of those fishes and into the amount of fishing going on; I would have statistics collected from the different countries as to the number of boats they have of different sizes and classes; statistics as to the parts of the North Sea in which they are fishing at different periods of the year; and I would have statistics of all catches of the different vessels. Then I would collate and compare the results with the biological examination of the life history of the fishes, and of the abundance of fish on the grounds, their migrations and reproduction, and so on, with the intensity of fishing as revealed by the other classes of evidence; and I think if one had all those details one would have no difficulty in putting one's finger upon the real cause of the apparent impoverishment. But without that full knowledge we are inclined to clutch at the first straw that offers itself. One year a fisherman says "Let us have hatcheries all round the coast," and there is a great boom for developing hatcheries. When that has been exploded they say, "We are destroying too many small fish; let us stop destroying small fish." But there is no exhaustive inquiry preceding these suggestions, and my view is that instead of this speculative empirical legislation, it would be far sounder to have an exhaustive inquiry first, so as to know if we are dealing with all the details, and then we should be able, as I say, to put our finger upon the real causes of any injuries to fishes and fishing grounds, and find the remedy.

2304. Then it comes to this: that with your exceptionally good opportunities of studying fish and your exceptional experience in fisheries, supposing you to-morrow were appointed Minister of Fisheries you would say that you have not got sufficient information to enable you to propose a Bill which you could be certain would be effectual to meet the necessities of the case?—I feel that an effective measure must be international; and therefore if I were Minister of Fisheries I should be unable to propose a national measure which in my opinion would be perfectly satisfactory. But I think a measure could be brought forward for restricting the colossal destruction of these small fish by steam trawlers, which would hold out a fair prospect of being useful and would help those foreigners who are already protecting their fisheries in the same

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way, and might lead up in the future (after this complete knowledge had been acquired which I have been recommending in the first place) to a real International regulation of the whole thing.

2305. Then would this be your idea: That let us say a limit of 12 inches should be fixed for brill and turbot and a limit of 10 inches for soles and plaice, and that this limit should be imposed only on fish which were to be landed in steam trawlers and steam carriers?—Although as I say I was informed that evidence of particular size limits was not required by this Committee; yet, I think I would be prepared to support a measure specifying those limits, but I would restrict it a little more and allow it to operate only for certain months of the year—those months of the year when, as those statistics that I have handed in show, the steam trawlers are fishing on the Horn Reef grounds.

2306. April, May, June, and July?—Yes, those four months; and although my impression is that an 11 inch limit would be distinctly better than a 10 inch limit, yet as a 10 inch limit is already in force in Denmark, I think, on the whole, those limits that you have mentioned would have my approval; but I say that in a few more months I should have been able to answer that question with far more definiteness than at the present time.

2307. Mr. Holt propounded what to me, at any rate, was a new theory, the idea that there were two races of plaice in the North Sea. Have you anything to say as to that?—That is a point I wanted to draw attention to, but I did not come to it. The fact is that we have already a good deal of evidence which tends to show that the plaice in the greater part of the North Sea, where the steam trawlers fish, are apparently of a different race from the fish in the southern area. The fish in the southern area appear to be much more closely related to the fish in the Channel, and the limit appears to be from the Humber over to the Dutch coast; in fact, it is just the limit south of which the smacks fish. I think, although our results are not final yet, there is a good deal of evidence that this northern area, where the steam trawlers fish, is inhabited by a larger race of plaice maturing at a different size from those in the southern area, which I believe is inhabited by a smaller race of plaice. It so happens that the two races correspond with the areas occupied by the smacks and steam trawlers respectively.

2308. Small plaice mature at 9 to 10 inches and the others at 13 to 14?—The limits are higher; the larger plaice mature more at 15 to 16 inches, even 17 inches, and in the southern area more like 11 or 12 inches. We are not prepared at the present time to state what is the exact average spawning size for those respective groups of plaice.

2309. Would you imagine that the smaller plaice of ten or eleven inches was the same age as the plaice of thirteen to fifteen inches, taking the two times of maturity?—I am not prepared on that point to give evidence now; we are carefully directing our attention to that point, and I have a preliminary report from one of my assistants upon it, but the investigations have

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not gone sufficiently far to enable us to reply directly.

2310. It would throw a good deal light on the question of migration if it were shown that there were two distinct races of plaice?—Yes, and even these migration returns tend to confirm the idea. I have already shown that the plaice tend to migrate in a circle within this southern area, and that relatively very few get out of the area at all. Only about three or four of these fishes out of the whole thousand marked have migrated to the north-west, and only one has migrated to the east; that is to say, they seem to tend to circulate within this area.

2311. But I suppose you would be of opinion that there should be but one size for all ports?—No, I cannot quite see that it is possible under those circumstances to fix the same size.

2312. I was going on to ask you, do you think that ten inches would be a fair limit to put supposing the existence of two races was established to cover both races?—I am afraid it would bear very severely on the smack industry, on the fisheries in this southern area. The sizes of plaice in that area are distinctly smaller than the sizes of plaice in the northern grounds, and what would interfere relatively little with the steam trawlers would interfere very seriously with the smacks. In this southern area if I take now the average catches per hour of our vessel, the "Huxley," over the four quarters of the year, I find that on the Doggerbank we get from January to March an average of from six to ten or even more plaice per hour above 12 inches, and a similar abundance or scarcely less from April to June; the figures are 9 per hour. Again from July to September we get 15 per hour, and then in the December quarter 26 per hour; so that in the northern area the abundance is never or very rarely less than 10 large plaice per hour, that is plaice above 12 inches. In the southern area, which is fished over by the Lowestoft boats, there is not a single record, if I remember rightly, in which the catch per hour of plaice of 12 inches and upwards exceeds eight per hour. There is one record of 8 per hour in the October to December quarter. The others were only three and four per hour and so on; whereas the abundance of small plaice in the southern area is very much greater than it is in the central grounds of the northern area.

2313. Still, apart from you as a biologist, as a practical man you see a great difficulty in fixing different sizes for different ports?—I thought it was the very idea of this particular Bill.

2314. I am not speaking of the Bill; I mean as a question of practical politics that it would be a difficult thing to say at Hull the limit should be 12 inches and at Lowestoft it should be 10 inches; or say 10 inches at Hull and 8 inches at Lowestoft?—My proposal was that the limit should be 10 inches for plaice.

2315. My question was whether 10 inches would be fair all round, even if you bear in view the fact that there may be two races of plaice?—I thought the suggestion was limited to steam trawlers.

2316. No, I put it generally. Supposing that any

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any limit was imposed, would it be possible to have 10 inches as the limit for both races of plaice; or would it be possible to have different sizes for different ports?—I think it would be possible to have two sizes for the steam trawler ports and for the smack ports respectively. It so happens that the geographical distinction between the steam trawler ports and the smack ports corresponds with the distinction between the two races of fish; and in Hull and Grimsby, and of course it would naturally be also in London in Billingsgate, I believe it would be quite possible to have a higher limit than in Lowestoft, Yarmouth and Ramsgate.

2317. Of course London, or Billingsgate, runs right into the southern district?—Yes, on the other hand the landings are entirely by carriers, I believe, and one of the advantages of this Bill is that it would enable a restriction to be placed definitively upon particular classes of boats landing in particular ports, and if particular vessels were found to be evading the intentions of the Act the Board could meet the occasion by a new Order. I think that is one of the advantages of this particular Bill—that it enables a distinction to be drawn between these two areas, and I do not think it would ever be possible for the steam trawlers to land their catches in these small ports, because the harbours are not adapted for it. The steam trawlers of Grimsby could not land their fish at Lowestoft in any quantities, or at Ramsgate; therefore I think at any rate at present, until any future development which cannot be at present foreseen, it would be quite possible to have a different limit for steamers as compared with smacks.

2318. Still, even from that point of view, an additional argument would be afforded for confining the Bill to steam trawlers?—I am afraid I misunderstood your question. I certainly do not think that any case has been made out at present for putting a limit on the catches of English smacks, but I would support a limit for steam trawlers.

Marquess of Huntly.

2319. We have had it in evidence from some witnesses that the plaice is not mature until it gets to about ten inches in size; is that your view?—Yes, certainly.

2320. Then surely you would not approve of the killing of any fish before it is mature?—No, I do not see why as a biologist I should hold that opinion, and I certainly do not.

2321. But looking at it merely with the object of preserving the breed of fish?—That raises the question whether the impoverishment of the sea is due to a diminution in the numbers of fish or to the prevention of their growth. Personally, I hold the belief that it is due chiefly to the prevention of their growth. I believe that so far as numbers are concerned there is absolutely no evidence that the numbers of fish in the North Sea are less than they formerly were, but only that they do not reach the same size; and that is because in my opinion the catching power is so great now that the fish are

Marquess of Huntly—continued.

now caught in increasing quantities at an earlier period in their life's history before they have had time to grow up.

2322. Then why do you disapprove of preventing those small fish from being killed at the smaller ports round the coast, and yet you would merely limit the prevention of their being killed to ports from which steam trawlers go to the Eastern grounds?—My reason, which I have already given, is simply that if you stop the smacks from catching, or rather selling, these small fish which they happen to catch, the great bulk, 90 per cent., of these small fish are caught on the Dutch Coast, and you would make a present of them to the large fleets of Dutch vessels fishing there; therefore I see no advantage in it. You put a restriction on an industry which is doing a lawful work without really doing any good for the improvement of the fisheries. If it could be proved or rendered reasonably probable that the restriction upon smacks would do good, would increase the stock of fish and so on, then I would be prepared to support such a limit. But I have given my reason for believing that it would not do that.

2323. Your impression is that 90 per cent. of these fish are killed by steam trawlers and 10 per cent. by all the other vessels round the coast?—No; my point was that 90 per cent. of the small fish are killed on continental grounds, not on English grounds. There are very few small fish on the eastern coast of England; it is different on the western coast of England; but speaking purely of the North Sea, on the eastern coast there are very few small fish along it. The great nurseries are on the continental shores; therefore we have to consider that fact.

Duke of Abercorn.

2324. With regard to Professor Huxley's opinion, which has been quoted more than once, that he did not consider that there would be any diminution of fish for many years to come, was not that opinion expressed before the introduction of steam trawlers?—I trace Professor Huxley's views back to the Royal Commission of 1866, but the great development of steam trawlers was after that time.

Lord Tweedmouth.

2325. In England especially?—Yes, and in Scotland and everywhere.

Lord Heneage.

2326. As a scientific naturalist you would like to have several more years' experience before any legislation takes place, but as a practical man and from a diplomatic point of view you think it advisable to pass some such Bill as this?—Under the restrictions I have mentioned and the limitations I have mentioned, I am in favour, since the matter has been proposed, of going on with it. I should not myself have proposed it at this present stage; I should have waited longer; but as the Bill is there and damage* may be done I should go on with it.

2327. But your principal desire for delay in the

* *Note*.—By this remark I meant to imply that the entire rejection of the proposal to impose restrictions might lead to misunderstandings abroad, especially in Denmark.

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the answers you gave is from the point of view of a scientific naturalist?—Yes, I feel that more knowledge is required before we can feel certain about what limits to impose and what good will be done by imposing those limits.

2328. You have given a good deal of evidence with regard to the number of German vessels which are fishing in these waters, with a view of showing that there were very nearly as many if not more than English trawlers?—Half as many German steam trawlers and smacks combined as English steam trawlers.

2329. I was looking at the memorandum which you put to the Report of the Conference of Christiania in 1901, where you state that the value of the fish that are landed in Great Britain exceeds the total value of all sea fisheries of other countries bordering the North Sea taken together?—That is perfectly true.

2330. Now with regard to Professor Herwig's statement in 1890, that was the year of the International Conference in London, was it not, at which Germany, amongst other countries, was represented?—I take it from you.

2331. When they acceded generally to the desire that there should be some prohibition of the destruction of undersized fish, or, as I think we then called them, immature fish?—I accept your statement.

2332. With regard to this statement of Professor Herwig's, or Director Herwig's, he stated that their first concern in Germany should be to increase their fleets of sailing and steam fishing vessels in order to secure their proper share of the produce of their native seas and especially to compete with the English, that this should be done even at the risk of contributing to the depletion of fish in the North Sea, and then should prohibitive regulations be necessary the voice of Germany would be powerful in an international convention. From the evidence you have just given you think that that time has arrived?—I have adduced evidence to show that Germany is confronted with the same grave problem as our English fishermen; they were not at the time Dr. Herwig made those remarks.

2333. Therefore this statement of Dr. Herwig does not apply to the present moment at all?—I would not like to speak for Dr. Herwig, but in my opinion the circumstances are materially altered so far as Germany is concerned.

2334. The German Fleets have now been increased up to their full limit I was going to say?—I think so.

2335. At least as much as could be expected, and therefore the reasons that he gave are not now in existence?—I should say so.

2336. I think you gave evidence before the Committee of 1900 on the Bill of 1900?—Yes.

2337. And you then gave practically the same evidence that you have given now with regard to your desire for a longer period of enquiry, and it was principally on your evidence that the Bill was postponed, was it not?—I cannot say whether it was principally on my evidence that the Bill was postponed; I certainly gave evidence against the Bill of that year on the ground that a specific size limit was mentioned of eight inches, and I said that, so far as our knowledge then went,

Lord Heneage—continued.

eight inches would be useless (and all the evidence we have since acquired has tended to confirm the opinion which I then expressed), and I saw no point in putting on the Statute Book a useless measure which would harass a certain number of fishermen.

2338. You are aware, I suppose, that in the Report it was distinctly stated that, in consequence of the evidence of a well-known scientific witness, the Committee had come to the conclusion that the Bill had better be postponed, or words to that effect?—I take it from you.

Chairman.

2339. I understand from the replies that you gave to Lord Tweedmouth that in your opinion if you had to draft an order under the provisions of this Bill it would be perfectly possible to draft one which would prevent the destruction of undersized fish on the north-eastern grounds, while not interfering with the owners of smacks at Lowestoft, Yarmouth, Ramsgate, and the other Southern ports, and which would protect a very large number at any rate of the undersized flat fish now in the North Sea?—I think so.

2340. And if we are not fully acquainted with the circumstances and learn from time to time the results of the inquiries of the Marine Biological Association, it would be possible, under the terms of this Bill to rectify at very short notice any mistakes which, by experience, we may be found to have made?—The Bill would give power to that effect.

2341. That is to say, if we found that the limit was too high or too low it could be altered; whereas if the Bill of 1900 had passed into law it would have been necessary again to apply to Parliament to rectify any error which experience might teach us?—Yes.

2342. I am sure you would not wish to leave a wrong impression upon the mind of the Committee as to what was the feeling of the Conference at which you were one of the representatives of this country, with regard to the Resolution that has been the subject of enquiry. During the interval I have looked into the matter, and I am informed, and I ask you whether it is so, that the Resolution was proposed by the Bureau?—The Resolution was formally proposed by the Bureau.

2343. And that Bureau is composed of the president of the Council, Dr. Herwig, the principal German delegate, the vice-president, Professor Petersen, the Swedish delegate, and the secretary, Dr. Hoek, the responsible adviser to the Dutch Government. Are not those the members of it?—Yes, those are the three members.

2344. You suggested that the proposal was not understood by the Dutch delegates; but do not you think that in the official position which Dr. Hoek holds he would have explained the exact purport of the Resolution to his Dutch colleagues?—I am not fully acquainted with the circumstances; I was not concerned in the drafting of those proposals and I knew nothing of the proposals which emanated in the name of the Bureau until the very day they appeared before the Council meeting; but all I can speak of is as to the effect of those proposals at the meeting itself. It certainly was the case, that the Dutch representatives did not understand

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[Continued.]

Chairman—continued.

understand the proposal. Really, the matter was going on into a long discussion, and the President, Dr. Herwig, ultimately got up and practically induced the council to pass the resolution on the ground that it was not a resolution which committed the representatives of the different countries to any line of action, but was more or less of the nature of what we call in England a "pious resolution," which was desired by a particular country, and would do no harm. As you ask my opinion, I can only state what I heard and the impression I gathered from the discussion which took place over the Resolution. There was no objection to the Resolution, except that one or two members representing Holland and Belgium really could not understand the drafting of it, and they asked questions as to the meaning of the phrase "make experiments"; and in the replies which were offered to their questions it was never explained to them that what was meant was legislative experiments. I think that a false impression should not be created as to the real intention of the Council in passing that Resolution, otherwise we might think they had broken faith. The Resolution recommends foreign countries, if I recollect rightly, to follow in the lines of England, if England passes a Bill now giving power to make these experiments; and knowing the feeling under which the proposal was carried, I feel that injustice might be done to them if it was thought that they in any way pressed the matter or were eager for it.

2345. Perhaps you will kindly look at the resolution?—Yes, it confirms what I say. The resolution reads: "The International Council resolves that it is desirable that in the event of a law being passed in Great Britain giving powers to make experiments for restricting the destruction of undersized flat fish, powers be also taken by the various Governments concerned to make experiments for restricting the destruction of undersized flat fish." Your Lordship will understand that in a mixed gathering where several languages are being spoken, the foreigners do not always perfectly understand, say, the English, and the English do not always perfectly understand, say, the German. What is perfectly clear to us is not always perfectly clear to them. And they raised the question; what was the meaning of this phrase "giving powers to make experiments." I know for a fact that they thought that what was intended was trawling experiments, scientific investigations at sea, and they did not all understand that it meant legislative experiments.

2346. Notwithstanding the fact that the word "law" is used in the resolution?—They asked the very question: "Is a law necessary in Great Britain in order to enable you to carry out some scientific experiments"; and I think that shows the misunderstanding that was at any rate in the mind of that particular individual.

2347. But then the members of the Bureau who proposed this had upon it representatives of Germany, Sweden, and Holland, and it was supported by Denmark and our own representative, was it not?—I presume the initial overtures for that proposal probably came from this country; I do not know. I think first of

Chairman—continued.

all the Bureau was very anxious to do everything possible to assist England in any measure that England was taking for stopping the destruction of those fish, certainly; but, although the Bureau was prepared to assist this country by that resolution, I think it would be a mistake to imagine from the carrying of that proposal that the representatives of all the countries concerned were therefore unanimous in feeling that the time had arrived for legislative experiments, because they were confused at the time and did not really understand the meaning of the resolution. But I think, after a further period of inquiry, when the matter has been made clear and put upon a firm basis, they will then be prepared in all probability to initiate legislation in their own countries for the protection of their own interests.

2348. Now with regard to the expression of opinion on your part that further inquiry is necessary, you are aware, are you not, that there was a Select Committee of the House of Commons to enquire into this matter in 1893. I will not go further back than that?—Yes.

2349. Then there was the Ichthyological Committee?—I think that was a Special Committee for discussing ways and means of carrying out experiments.

2350. Yes, but its object was to throw light upon the subject generally, was it not?—So far as I recollect it was purely for discussing means by which the State should assist scientific investigations.

2351. Then there was a Departmental Inquiry as to statistics?—Yes.

2352. Then there was the Bill of 1900 and the Inquiry which was held into that?—Yes.

2353. And there have been inquiries conducted by the Fishmongers' Company?—Yes.

2354. And I should add, of course, the inquiries which had been made by the various nations who are parties to the International Sea Fisheries Inquiry which are still going on?—Yes.

2355. Then there were statistics collected by the Board of Agriculture and Fisheries. Perhaps you do not know that?—I only know informally.

2356. You know we spend 1,600*l.* a year in making inquiries?—Yes.

2357. Do you really think after all those enquiries have taken place, and we are constantly being pressed to do something upon the recommendations of those various committees, it is advisable to do nothing until further inquiries have been held?—My impression is that most of those Committees you have referred to were Committees recommending further inquiries. For example the Committee of 1893 and the Committee of 1900 examined proposals for restricting the destruction of these fish, and dismissed the proposals with the statements: "We know nothing," "We do not know enough about the situation," "We want more exact scientific inquiries"; and it was only in 1900 that the last of those recommendations was made to that effect.

2358. That is four years ago?—Yes, I understand immediately after that His Majesty's Government entered into some conferences with foreign

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Mr. GARSTANG.

[Continued.]

Chairman—continued.

foreign countries which happened to be promoted at the same time, and found that the most likely method of bringing about International co-operation in regard to regulating fisheries would be by joining in those preliminary International investigations; but speaking for my own Association we only received our commission eighteen months ago, and have not even issued our first Annual Report. Therefore, I cannot admit that the investigations are so complete at the present stage that it is necessary immediately to act.

2359. At any rate, I think you have already admitted that even if we are premature in legislating now, the basis upon which the legislation is framed is such that we can alter it if we should find that further investigation makes it desirable to do so?—Yes, I think the elasticity of the proposal is one of its greatest recommendations so far as I am concerned. The Danes have had a high size limit in operation for many years, and their fishermen begin now to complain that they are being hardly treated by this strict legislation against them; because side by side with them are the English and German steam trawlers fishing and catching these small fish and destroying them in great numbers, and throwing them overboard again. They themselves catch the fish and do not destroy them; they throw them overboard alive. They think they are hardly treated, and are now agitating in Denmark for the repeal of those restrictive regulations. I think it would undoubtedly strengthen the hands of the Danish Government, now that this Bill has been promoted, if something could be done to stop the depredations of the steam

Chairman—continued.

trawlers on those particular grounds; but I do not think any case has been made out for general legislation.

Duke of Abercorn.

2360. But the Danes are not trawlers; they are seiners.

Lord Tweedmouth.

2361. Have you formed any sort of an opinion as to the proportion of fish thrown back in the ordinary course of business by trawlers, that live?—It is a very variable thing; it partly depends upon the state of the market, and—I cannot give any average figures—but I do know from experience of the Lowestoft smacks, for example, and a few of the steam trawlers that fish from there, that they do throw overboard at times a considerable number of small fish, more particularly the steamers. When they are fishing on those grounds, Terschelling and the north coast of Holland, they catch at times a very large number of these small fish, and it would not pay them to bring the small fish to port—they throw them overboard. On the eastern grounds, of course, by the Horn Reef, there is probably a far greater rejection of fish which have been caught, owing to their being undersized.

2362. Do they mostly live, do you think, after they are thrown overboard?—I believe the majority die. I cannot at present say more. It depends on the length of the haul and the nature of the bottom; and I feel the majority probably die.

The Witness is directed to withdraw.

MR. WILLIAM THOMAS LOVELL is called in; and Examined as follows:—

Chairman.

2363. I think you conduct a business in Lambeth, do you not?—Yes.

2364. A fried fish business?—Yes.

2365. Can you speak generally for those who are engaged in the trade, and as to the number of customers that fried fish dealers have?—Yes.

2366. About how many are there engaged in the trade?—So far as I can gather, I should think there are about 2,000 engaged in the London trade, and I should think that we have, on an average, from 500 to 3,000 customers a day, so that would total up pretty well to half London's population. I feel that I am fairly competent to speak on the subject of what the size of these fish should be, as the majority of them come into our hands.

2367. To begin with plaice. What is a useful size of plaice in your retail business?—A useful size would be nothing less than twelve inches.

2368. But what do you do with a ten-inch plaice?—Some would use it and some would not. That is according to the locality of the shop.

2369. Do you try them in batter?—Yes, batter and fat.

2370. Do you put more batter on a small fish and less on a large one?—That is entirely accord-

ing to the cook; some believe in batter and some do not.

Chairman—continued.

Duke of Abercorn.

2371. But not according to the consumer?—No.

Chairman.

2372. Has the trade been improving or decreasing?—Decreasing terribly.

2373. Why is that? Is it owing to the sizes of the fish?—It is on account of our not being able to get these flat fish—plaice. Plaice is the most popular fish in our line of business; people do not care for any other.

2374. And do you find an increasing difficulty in getting good-sized flat fish?—Yes, there has been a difficulty for years past.

2375. What about price? Are they going up or down?—They are going up considerably.

2376. Even for small fish?—Yes.

2377. You would, I suppose, rather give a better price for a large fish than a lower price for a small fish?—Decidedly. In my case small fish are no use to me at all, certainly.

2378. Have

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Mr. LOVELL.

[Continued.]

Chairman—continued.

2378. Have you been accustomed to be able to get larger fish in former years?—Yes.

2379. And you find it increasingly difficult to do so now?—Yes.

2380. You consider that this last year has been as bad as any year?—Every year gets worse.

2381. Have you seen the proposal in the Bill to prevent the landing of undersized flat fish from the eastern grounds, which I understand are the main sources of supply?—Yes.

2382. Would you, as a retail dealer in undersized flat fish, approve of that?—Certainly.

2383. In the hope that the result would be that larger fish would be caught in the future?—Certainly. We had a splendid illustration of that at the time of the last Grimsby strike. When it was ended we had one of the finest lots of plaice we had had for many a year.

2384. Owing to the vessels being laid up for months which mostly caught the smaller fish?—That is it.

Duke of Abercorn.

2385. What class of people do you supply with your fried fish?—Chiefly among the poorer classes who have no means of cooking it themselves.

2386. Then this diminution in the supply of flat fish must be a great loss to them?—Certainly.

2387. And also if you had a superior class of fish with regard to size it would be an equal benefit to them, because they could buy those fish at a cheaper rate than they now do the smaller ones?—Yes.

2388. And they would have a larger amount of food for consumption?—That is so.

2389. Therefore you consider that this diminution of plaice and flat fish really affects the public very much?—Very much indeed. We got up a petition in 1890, and these were the terms of that petition got up by our trade. "This is the petition of the London Fried Fish trade, and the trade in general. That we the undersigned members of the above trades humbly beg of thee to take into consideration a great and serious grievance that is existing in our trades. That that grievance is the catching and selling of immature fish, especially flat fish. That not only is the catching of the above fish a wilful and wanton waste of human food, but a destruction of the fishing grounds and the ruination of our trade. That we are of opinion that an Act of Parliament should be passed making it illegal to catch or sell immature fish. That trawl fish such as plaice, sand dabs, &c., &c., should not measure less than 12 inches from the tip of the nose to the end of the tail. That if this grievance is not speedily stopped it will mean an extinction of a trade that supplies a necessary article of food to more than half the population of London, especially the poorer classes." And we have been going on ever since, endeavouring to do something to get it done.

2390. Do you have individual complaints from your customers with regard to the supply of this class of fish and the high price?—Yes. You see they do not care for other kinds of fish,

Duke of Abercorn—continued.

although we have to use them. Fortunately, these last few years other fish have sprung up, but they do not like them; if we do not get plaice our trade falls off 25 per cent.

2391. And what applies to you, I suppose, applies to the 2,000 others engaged in the same trade in London?—Yes.

2392. Perhaps it is not right to ask you this, but do you ever deal in dog fish?—Yes, I can give you the statistics of the last two months of the kinds of fish I have had to fry—not that I want them or the public want them—but I have had to fry them. Take January and February this year. On January 1st we had megrims—I suppose you know what they are. On the 2nd of January, turbot—they happened to come my way rather reasonably. On the 4th, turbot and brills; 5th, turbot and brills; 6th, plaice; 7th, turbot; 8th, 9th, 11th and 12th, dog fish; 13th, 14th and 15th, haddocks; 16th, plaice and haddocks; 18th to 21st, dog fish; 22nd, cod; 23rd, cod and dog fish; 25th, dog fish; 26th, haddocks; 27th, skate; 28th and 29th, haddocks; and on the 30th, turbot and brills—plaice only twice during that month. February 1st, dog fish; 2nd and 3rd, cod; on the 4th we were closed; 5th, whiting; 6th, dog fish; 8th, dog fish; 9th, turbot and brills; 10th, Ostend plaice; 11th haddocks; 12th, megrims; 13th, cod and skate; 15th, cod; 16th, large Aberdeen plaice; 17th, large Aberdeen plaice; 18th, cod; 19th, plaice; 20th and 22nd, dog fish; 23rd and 24th, Iceland plaice; 25th, plaice; 26th, dog fish; 27th, skate; 29th, cod; plaice five times during the month of February, making seven times during those two months we were able to purchase plaice.

2393. Then they come into your shop as dogs; what do you put them on the table as?—We do not sell them as dogs; we skin them and sell them as all sorts of fish-eels. One of my customers said the other night: "You have some sturgeons, have you?" I said "Yes, sturgeons"; he said, "I will have some of those young sturgeons." We cannot sell them as dogs, the same as with cat fish, but of course the people do not like these fish; they might eat them once or twice, but they soon sicken of them. The one popular thing is plaice, and if we cannot get plaice our trade is anyhow.

Chairman.

2394. How much meat is there on a 10-inch plaice?—Very little. I should think if you take the flesh from the bone it would not weigh more than half an ounce.

Duke of Abercorn.

2395. How many years ago did the diminution begin to take place in plaice?—I should think we might go back twenty years.

Lord Tweedmouth.

2396. You buy these fish at Billingsgate every morning?—Yes.

2397. And I suppose it depends very much on the price of the particular fish what you give your customers?—Yes, we can only make a certain amount out of it.

2398. You

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Mr. LOVELL.

[Continued.]

Lord Tweedmouth—continued.

2398. You take the most reasonable fish in Billingsgate market?—Yes.

2399. At the market prices?—Yes.

2400. But turbot and brill are just as good as plaice?—Decidedly, if we can get them.

2401. You seem to get them pretty often?—I am an exception in Billingsgate Market; I often get 10, 20 and 30 stone of turbot and brill where others will not get them.

Lord Tweedmouth—continued.

2402. Then on days when you get turbot and brill you have not much to be pitied for, or your customers?—You must understand that amongst the class of people we deal with we do not sell turbot and brill as turbot and brill, we have to sell it as plaice. Plenty of people, if you said you had turbot, would not have them.

The Witness is directed to withdraw.

MR. CHARLES JEFFS is called in; and Examined as follows:—

Chairman.

2403. What is your business?—Steam boat owner.

2404. At Grimsby?—Yes.

2405. Have you read the Bill?—Yes.

2406. Are you of opinion that the powers which are given to the Board of Agriculture and Fisheries are such that they may be used with advantage to your trade?—I am of that opinion.

2407. In what way do you suggest in the first instance that the orders of the Board should be made?—In the first instance I would rather have taken the Bill formerly of 1900, a positive Bill, rather than a permissive Bill. But I am very anxious that something must be done for the trade.

2408. Do you think that the 8 inch limit as proposed in the Bill of 1900 would have the effect of preventing vessels from going to the Eastern grounds?—No, the 8 inch was not sufficiently large. Twenty years ago we began with the 13 in. plaice, and of course we gave way that Ramsgate and Brixham might come in with us. At which time and ever since we have been very anxious that something might be done to prevent ourselves from catching the small fish that we are catching.

2409. A self-denying ordinance?—Yes.

2410. And you would not desire to extend that power so as to prevent Lowestoft, Yarmouth and Brixham from bringing in the fish of smaller size that you yourself might be prohibited from catching on the eastern grounds?—That is so.

2411. And this Bill would give the Board of Agriculture and Fisheries power to make regulations for different sizes in different parts?—That is so; only that there is this, we must look at the fact. I have perfect confidence that the Board of Agriculture and Fisheries would do what is right and just to the whole of the trade. It would not do for the smacks to be allowed to fish on those grounds for undersized fish whilst the steamers are prohibited from so doing.

2412. But under the Bill it would be possible to pass an Order affecting steam trawlers and carriers, not steam trawlers only; and if it were found that the result of that was what you have just now said was possible, then it would be within the competence of the Board to extend the same provisions to vessels which went and caught fish at places where you were practically

Chairman—continued.

prohibited from going?—I have full confidence that it would be done.

2413. Has it not been in contemplation in Grimsby to lay up the vessels during certain months of the year in order to save the undersized fish?—Yes, that has been a suggestion.

2414. But it was never carried into practice?—No; it has not been carried into practice.

2415. Was there a conference in 1902 at Grimsby?—Yes.

2416. And was this the resolution passed there: "That in the opinion of this Conference the systematic regulation of the catching power is necessary during certain months of the year to prevent the capture of enormous quantities of fish that neither yield profit to the vessel, the crew, nor the vendor."—Yes, quite so.

2417. Do you agree with that?—Yes.

2418. Your only difficulty was how to carry it into effect?—Yes.

2419. And you think that could be done under this Bill?—You could not lay up the vessel.

2420. No, "to prevent the capture of enormous quantities of fish that neither yield profit to the vessel, the crew, nor the vendor"?—That is so.

2421. Do you agree generally with the trade in Grimsby and Hull and evidence given before the Committee, that it is desirable to delay no longer in introducing some legislation of this kind?—I am fully of that opinion and have been for a long time. I have now worked over twenty-four years, and it has come to pass now that the North Sea practically is depleted of large fish. I am a practical fisherman. I served my time fifty years ago as apprentice and have been in the trade ever since, and from that time to this I have seen the diminution of soles, turbot, and brill going on, and if we are allowed to continue in this unwanton mischief, there can be only one end, and that is the ruin of the trade. We had a vessel come in yesterday with a fish that had been caught forty-eight hours, and it was alive and kicking.

2422. A plaice?—A plaice. I have brought live plaice that lived for twenty-four hours many scores of times myself, so that so far as the throwing overboard of the fish is concerned there are circumstances, when they get jammed down, and that kind of thing, when you cannot save

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Mr. JEFFS.

[Continued.]

Chairman—continued.

save their lives; but with short hauls—and steam trawlers now do not make long hauls—an enormous quantity of fish might be saved, even when fishing amongst that small fish.

2423. But if it was not worth their going to these banks the hauls would not be made at all?—No. We had a vessel in on Saturday that landed 50 cwts. of small plaice that only fetched 1s. per box of eight stone, and each box would contain 400 to 500 small fish. Of course there were eight inches and under eight inches, and a few above eight inches; but they had no business to have been brought in, and I do say, although we are perhaps as great sinners as the rest, we should be saved from ourselves; and so far as I am concerned, and I am president, and have been for last twenty years, of the Fish Merchants' Association, we do agree that the time was fully come, and more than fully come, that the Bill ought to be passed.

Lord Heneage.

2424. You are perfectly prepared on behalf of the trade of Grimsby to state that you are willing to accept this Bill, whatever Bill might have been in your mind at other times?—Fully.

2425. And you rather look upon it as an improvement in the Bill that the Board of Agriculture and Fisheries will be able to draw upon your experience of one year in any alteration of the orders in another?—Yes, inasmuch,

Lord Heneage—continued.

as I believe I said before, I have full confidence after they have got experience from time to time, that they would alter the Bill for the benefit of the trade and the public.

Duke of Abercorn.

2426. To what do you attribute the shortage of fish coming in now. Is it due to over trawling or the capture of undersized fish?—I have always believed it is through the capture of the millions of undersized flat fish; and I also state, from observation, that if it had not been for the Danish Government putting the law into operation years ago, we should not have had any small fish to catch now. At that time they used to drag, the same as we have ourselves in the Humber, with drag nets these small fish on to the shore and use them for manure. Happily, through the conference that was held in 1890, the Danish Government enacted the law that they were not allowed to land or sell; and hence we have some fish left in the North Sea. I believe as I stated that if it had not been for the Danes there would have been very little small fish as well as large, to catch.

2427. Where do they draw these in from?—From the shore, in Denmark. It is a flat, sandy shore, and they were allowed to do that the same as we were before the three mile limit came into operation.

The Witness is directed to withdraw.

MR. JAMES JACKMAN is called in; and examined as follows.

Chairman.

2428. You are Chairman of the Lowestoft Trawling Smack Small Damage Protection Society?—Yes.

2429. Does that Society represent 230 out of 250 in the Port of Lowestoft?—Yes.

2430. Have you been engaged in the trawling industry all your life?—Since I was 19; now I am 60—41 years.

2431. You have read the Bill?—Yes.

2432. And are you able to express any opinion upon it without seeing the orders that may be passed under it?—My opinion is that if the Bill is passed in its present form it will be very injurious to Lowestoft as a fishing port.

2433. Will you say why?—Because if it is enforced in Lowestoft we shall be practically wiped out.

2434. How are you going to be wiped out; what do you imagine will happen under the Bill?—In Lowestoft we are only sailing craft; the destruction of small fish in connection with us is not very large.

2435. Supposing you were exempted from the operations of the Bill, would that wipe you out?—If we were exempted from the operations of the Bill we should be satisfied.

2436. Do you see anything in the Bill which necessarily makes it applicable to the Lowestoft trade?—I presume by the Bill that our ports will come under the heading.

2437. But you must not presume; you must read the Bill. Let me read it to you: "The

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Chairman—continued.

Board of Agriculture and Fisheries may, if they think it expedient so to do for the purpose of preventing the destruction of undersized flat fish make orders for prohibiting either absolutely or subject to such exceptions and conditions as may be prescribed, the landing of any flat fish not exceeding the prescribed length." Supposing they said they were not to be landed at Grimsby, Hull and Billingsgate, would that wipe out the Lowestoft trade?—No, that would not wipe us out; it will not interfere with us at all. But I presume that if this Bill is passed it will be handed over to the Board of Agriculture and Fisheries, and they will then have it in their power to say whether we shall be exempt or whether we shall not be exempt; and, I presume, handing over to that Board they would take into consideration that we were culprits to a certain extent as well as the steam trawlers, and by that means we should be included in the conditions of whatever that Board may form. I am of opinion that the steam trawler is very much to blame for the killing of immature fish.

2438. You heard the evidence of the last witness, did you not?—I heard a part of it.

2439. The last witness represented the steam trawling industry, and he informed the Committee that what they wanted was a self-denying ordinance, something that would protect them against themselves. Supposing the Board of Agriculture and Fisheries were to pass an Order which was to apply only to steam trawlers or carriers

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carriers

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Mr. JACKMAN.

[Continued.]

Chairman—continued.

carriers bringing fish from those steam trawlers, would it affect your trade?—No. If the steam trawlers, or owners who are interested, wish for a Bill of this description I have no objection to their having the Bill; but at the same time we as Lowestoft trawlers object very strongly to being within the scope of the Bill in any shape or form. Our only object in coming here to-day is that we shall ask this Committee to allow us to go on as practical fishermen in the same way that we have been going on.

2440. The way you have been going on I understand is, that you do not go to fish on these Eastern grounds north of Heligoland?—In Lowestoft, I might say up to the first two months, this year has not been so remunerative as past years; but taking the past ten years I should think at Lowestoft it has been as good a ten years as ever Lowestoft has seen since it has been a fishing part.

2441. But my question was, do you at Lowestoft go trawling north and north-east of Heligoland?—No, we do not go, nothing near so far as that. Our grounds are in latitude from the Outer Dowson across to Ter Schelling; in fact we very rarely go as far as that. We do not go often much below (*i.e.*, north of) the Texel.

2442. Therefore if the Bill were made to apply to steam trawlers only, I want to know, would you then, when you know that steam trawlers no longer find it worth their while to go to the Eastern grounds beyond Ter Schelling, go and catch the fish they were not allowed to catch?—We cannot go there, the distance is too far.

2443. And you would not complain, if you did do such a thing as go to the east of Ter Schelling and fish in those grounds, if the provisions of the Bill were made applicable to you?—If you can trust us that far, I can guarantee to-day we will not go beyond Ter Schelling to catch any fish, if you allow us to go as far as that and no further. We should not go there at any time unless we were blown there in a gale of wind, and then we should not stop there.

2444. But if you went there in the summer time when there was not a gale of wind, do you think you could get back again, if it was calm weather, in time to sell your fish?—No.

2445. Therefore if the Bill were confined to certain summer months of the year, is there any

Chairman—continued.

reasonable prospect that you Lowestoft people would go to those eastern grounds?—No.

2446. Therefore you think the Board of Agriculture and Fisheries would be perfectly safe in their endeavour to protect these grounds to exempt the Lowestoft fisheries altogether?—Yes.

2447. And that would satisfy you?—Yes.

Duke of Abercorn.

2448. What is the number of the Lowestoft trawlers?—We have now about 270.

2449. And how many of those are steamers?—There are only six steamers sailing out of Lowestoft, and they belong to Yarmouth really, although they land their fish at Lowestoft; but we have not got one steam trawler belonging to Lowestoft?

2450. Do those six steam trawlers go up to the eastern grounds?—They go further north than we do.

2451. But you are not responsible for them?—No, it is nothing to do with us.

Lord Tweedmouth.

2452. Are your fish landed by steam carriers?—No; we are under what you may call the single boat principle; each boat goes and catches his own voyage and brings it to land and lands it.

2453. They have to take ice?—They have to take ice, so that we cannot go very far after the fish; because if we went over eighty or ninety miles we could not get back to the market with the fish; it would be really spoilt.

Lord Heneage.

2454. What tonnage are your vessels generally?—Averaging from fifty to sixty tons. I should think the average tonnage of the port would be about fifty-four or fifty-five tons.

2455. What is your largest vessel?—Sixty tons. I do not think there are more than ten over sixty tons.

Chairman.

2456. What is the largest?—Not above sixty-three tons.

2457. Supposing the Bill were limited to steam vessels, and to trawlers of sixty-five tons and upwards, it would not affect you?—No, it would not injure us.

The Witness is directed to withdraw.

MR. HENRY GOODBOURN is called in; and Examined as follows:—

Chairman.

2458. Are you a smack-owner and fish salesman at Ramsgate?—Yes.

2459. Is the fishing trade of Ramsgate very much the same as that of Lowestoft?—Yes.

2460. Is the size of the vessels about the same?—Rather smaller.

2461. Do they go further out into the North Sea than the Lowestoft vessels?—Not so far.

2462. Then any restrictions which did not affect the Lowestoft trade would not affect the Ramsgate trade?—No.

Chairman—continued.

2463. You heard the evidence given by the last witness?—Yes.

2464. Do you agree with it?—Yes.

2465. Have you anything to add to it?—No.

Lord Heneage.

2466. What is the largest size of your vessels?—41 or 42 tons.

2467. Do none of 50 tons sail from your port?—There might be one or two.

2468. What

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Mr. GOODBOURN.

[Continued.]

Lord Tweedmouth.

2468. What is the length of beam that you use?—Average about 40 feet.

Duke of Abercorn.

2469. How many trawlers have you at Ramsgate?—About 160 to 170 all told.

2470. You fish chiefly along the Channel?—

Duke of Abercorn—continued.

Chiefly to the eastward of Ramsgate, abreast of Orfordness.

2471. You do not go far out?—Not more than 80 or 90 miles.

2472. How far south?—The South Foreland.

The Witness is directed to withdraw

MR. JAMES SYDENHAM is called in; and Examined as follows:

Chairman.

2473. You come from Brixham?—Yes.

2474. You are a working fisherman and owner of a sailing ketch?—Yes.

2475. You have been for 34 years trawling the east coast of the North Sea and the English and Bristol Channels?—Yes; not very much in the North Sea.

2476. Would an order of the Board of Agriculture and Fisheries under this Bill, which was restricted to steamers or sailing vessels of 65 tons and upwards, affect your trade?—I think it would.

2477. Have you got any vessels of 65 tons and upwards?—No.

2478. Have you got any steam trawlers?—No.

2479. Then how would it affect the trade?—Because we do a little trade of our own—the same as Lowestoft and Ramsgate men do.

2480. But, I say, if the Bill did not apply how would it affect your trade?—As the Bill stands now it would seriously interfere with our trade.

2481. But the Bill is an enabling Bill, you see?—Yes.

2482. Have you read the Bill?—Yes.

2483. It is an enabling Bill?—Yes.

2484. The point I put to you is, if the Board of Agriculture and Fisheries made an order affecting every steam trawler and sailing vessel of 65 tons and upwards but no others, would that affect you?—It would not affect us if it left us out altogether—only steam trawlers alone.

2485. Would it affect you if it touched sailing vessels of 65 tons and upwards?—No; we have none of 60 tons at Brixham.

2486. Did you hear the evidence given by Mr. Jeffs?—Yes.

2487. He said that what they wanted was something which would protect the steam trawling vessels against themselves, that is to say a self-denying ordinance?—Yes, and we want something to protect the sailing vessels.

2488. But he said he wanted something to prevent them from going to what is known as the Eastern Grounds off the coast of Holland?—We do not go there.

2489. Therefore it would not affect you at all?—No.

Chairman—continued.

2490. Otherwise, what you want is, not to be affected by any Order under the Bill?—Yes; that is what we want.

2491. And you are perfectly satisfied if you are not?—Yes.

Duke of Abercorn.

2492. How many trawlers has Brixham?—140 large, 60 small.

2493. They work on the co-operative system, do they not?—Yes, we call it the single boat owners system.

2494. You have no companies there?—No, all fishermen owners.

Lord Tweedmouth.

2495. Do you notice any difference in the number of fish on the grounds you fish?—Not very much.

2496. Do you think there are as many fish now as when you first went to it?—Yes.

2497. Are you doing a good business?—The trade has gone back a tremendous lot lately.

2498. Why is that?—I could not tell you. The French steam trawlers trawl the English Channel; that is it.

2499. Your catches are less then?—Yes.

2500. You have found fewer fish than you did?—In the English Channel.

2501. Do you not go to the English Channel so much?—Yes, it is all fish in the English Channel.

2502. But you get smaller catches of fish?—Yes.

2503. And you attribute that, not to the diminution of fish in the sea, but really to the French steam trawlers?—Yes.

2504. Have you any idea of the sort of Bill you would like to see passed?—No.

2505. You want to be left alone altogether?—Yes.

Duke of Abercorn.

2506. Have you any idea where these foreign steam trawlers come from?—Belgium and Ostend mostly.

2507. They are foreigners?—Yes.

The Witness is directed to withdraw.

Ordered—That this Committee be adjourned to To-morrow at 11 o'clock.

Die Veneris, 18^o Martii 1904.

PRESENT :

Marquess of ABERCORN (Duke of ABERCORN).

Earl of ONSLOW.

Earl of YARBOROUGH.

Lord MELDRUM (Marquess of HUNTLY)

Lord TWEEDMOUTH.

THE RIGHT HON. THE EARL OF ONSLOW, G.C.M.G., in the Chair.

SIR ARTHUR VIVIAN, K.C.B., is called in; and Examined as follows :

Chairman.

2508. You are, I think, a member of one of the Fisheries Committees?—I am an Alderman of the County Council, and a member of the Fisheries Committee, of Cornwall.

2509. You have had a very considerable experience, have you not, of fishery matters round the south and west coasts of England?—Yes, but I am here entirely to state my own personal views; I am not expressing the views of the Fisheries Committee at all; whether the views of the Fisheries Committee may be the same or not, I am not aware. We had your Bill before us the other day, but it was not discussed at all.

2510. There is one clause in it to which no doubt your attention has been drawn, that is the clause giving power to the Board of Agriculture and Fisheries to make bye-laws in the same manner as those powers are now possessed by the Fisheries Committees?—Yes, Clause 2.

2511. Have you any opinion as to that?—I have looked at that clause, and I think it is a very valuable clause towards the protection of under-sized fish; at the same time I hope it will tend to a uniformity of bye-laws along our coast, and also, if it is possible, to a uniformity of authorities. In our part on the south coast we have estuaries which are really the nurseries and breeding grounds of fish; but which are subject to a different jurisdiction to the three-mile limit outside. They are called "Rivers," and as such, I suppose, originally they were put under the jurisdiction of the Fowey Conservators, who have really more to deal with salmon and fresh fish; and I think it would be very desirable indeed if they were all under the authority of the County Council Sea Fisheries Committee.

2512. You probably, as a member of the County Council, have had some experience of the working of the Contagious Diseases (Animals) Act?—Yes.

2513. And you know that it has been the desire of the Board of Agriculture to get uniformity in the administration of that Act by the local authorities as much as possible?—Yes.

Chairman—continued.

2514. And do you think that a similar attempt at uniformity in fishery matters is likely to meet with as much success as has attended the uniformity under the Contagious Diseases (Animals) Act?—I think so, certainly. I think it would be a very good thing.

2515. I suppose there are no steam trawlers round your coast?—Yes, there are.

2516. Belonging to the ports?—The steam trawlers do not belong to our part, but they come down; and I think it would be for the benefit of our fisheries, which have been to a great extent denuded and spoilt by the excess of netting of different sorts, that the sailing trawlers should be put under the same bye-laws as the steam trawlers.

2517. What is the largest size of sailing trawler in your ports?—I suppose some of them which come down our coast, must be up to 100 tons burthen.

2518. Though they are registered in ports within your district?—I think a great many of the sailing trawlers belong to Brixham in Devonshire, and perhaps to Plymouth too.

2519. Do they ever come into the territorial waters?—No; but the small trawlers come into the shallow waters. I have myself seen this year as many as four trawlers, perhaps of 20 or 30 tons, sweeping the Helford Estuary, which is under the jurisdiction of the Fowey Conservators, and which is not above a mile and a half across. Four trawlers of that size, it may be well imagined, rake up the whole of the ground.

2520. How do the Fowey bye-laws and your bye-laws differ?—The Fowey bye-laws do not allow any trawling inside their estuaries; but, inasmuch as the Fowey Conservators are a different authority, and they have no funds at their command; they are quite ready to meet us in allowing us to prosecute. At the same time, it is rather a cumbersome business to act on; and I think myself it would tend much more to the

preservation

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Sir A. VIVIAN, K.C.B.

[Continued.]

Chairman—continued.

preservation of these grounds if they were directly under the Fisheries Committee of the County Council.

2521. In fact, it is really a question of the difficulty of policing?—Yes, that is so; but the coastguard would look after the observation of the bye-laws; and if it was reported direct to the County Council Committee, and they could prosecute, I think it would be found a much easier way to stop this disturbance of the nurseries.

2522. Is there any steam vessel policing these waters under the control of your Fisheries Committee?—No. I used myself in my own little yacht to do steam trawling outside the three-mile limit.

2523. I mean, as regards policing; have you any vessels which are enforcing your bye-laws?—No.

2524. How are the bye-laws enforced?—The bye-laws are enforced only by the coastguard.

2525. Do you ever have a gunboat of the Royal Navy?—Not on our part. A gunboat, I believe, has been applied for to go off the Seven Stones, between the Cornish Coast and the Island of Scilly, to see to the foreign fishermen.

2526. Then what is the process by which the coastguard assist you. Do they report the number of trawlers?—Yes, they take their numbers.

2527. They do not, I presume, stop them, or go alongside of them?—Yes, they do sometimes. But I think there have been hardly any prosecutions at all, in consequence of the difficulties of the authority to a great extent. As I said before, the Fowey Conservators are very anxious to meet us, but they have not funds for prosecution, and a case would have to be handed over to the Fisheries Committee in order to prosecute.

2528. Thus, I suppose, generally you would say that the facilities for policing the area are not sufficient?—I think if the coastguard were properly instructed, and properly advised how to act, they would be able to look after the estuaries at any rate.

2529. Do you know at all what instructions are issued to the coastguard?—No, I do not. So far as I know, the instructions to the coastguard are not very stringent.

2530. You do not know at all whether in recent years there have been more precise instructions issued to them than formerly?—No. On some occasions I have spoken to the chief boatmen in command of the coastguard in my part, and I think there has been an uncertainty in the instructions.

2531. Do you ever attend the conferences at the Board of Trade?—Yes, I have attended the meetings.

2532. And you have heard the matter discussed carefully at some of those conferences?—I do not think I have heard it.

2533. It has been discussed several times?—In recent years do you mean?

2534. Yes. There has been rather a demand that the Royal Navy authorities should do more to assist in policing the water. You have not

Chairman—continued.

heard of that?—The Royal Navy would be a great advantage to look after the three-mile limit, but as regards the estuaries themselves, I believe the coastguard could do it.

Duke of Abercorn.

2535. Have you any breeding grounds for fish within the area over which you have jurisdiction?—These estuaries are the breeding grounds, to a great extent, I think.

2536. When you say the Helford estuary has been fished out a great deal by trawlers, do you refer to steam trawlers or to sailing trawlers?—Small sailing trawlers. The Helford estuary was a noted place for all sorts of fish, and when I first went to live there, 19 years ago, the fishing there was certainly very much better than it is now. I look upon it as having been destroyed to a great extent by the excessive use of nets of different sorts; that is to say, not only trawling, but also seining and trammels.

2537. And what do these trawlers do with their undersized fish; have you any idea where they dispose of them or how they dispose of them?—No, I do not think they are disposed of; but I know when the trawl is brought up a great many undersized fish are dead. So far as I have seen (and I have seen trawling myself) they are dead from the trawl being kept down a great time, say an hour and a-half; very often they lie on the deck dead, and go overboard as dead; and you see constantly a lot of gulls following the trawler picking up the dead fish.

2538. And the foreign trawlers are not allowed to come within your limits, I imagine?—The steam trawlers do not come within the three-mile limit.

Lord Tweedmouth.

2539. Have you any idea of a remedy? Do you think this Bill would be a remedy?—Yes, I think the second clause of this Bill will certainly do good; it will tend towards the preservation of the small fish.

2540. But you have the power already to make regulations within the territorial waters?—Yes, but I was saying that we have two authorities on the south coast of Cornwall; we have the County Council Fisheries Committee, and we have what are called the Fowey Conservators, who have the power over all the estuaries, and their bye-laws already prohibit trawling, as I said before, but the difficulty is to enforce it.

2541. And you think a central authority to enforce it for the whole country is what you would like the best?—Yes, if we had uniformity of authority as it were, and uniformity of bye-laws with the three-mile limit, right along the coast, I think it would be a great aid to the preservation of fish.

Earl of Yarborough.

2542. Did I correctly understand you to say that there were 100-ton sailing trawlers?—I really do not know, but judging by the look of them. I know nothing myself of their sizes except from seeing them about.

2543. There

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Sir A. VIVIAN, K.C.B.

[Continued.]

Earl of Yarborough—continued.

2543. There are not very many of that larger size, are there?—I suppose not. When one is yachting about one sees them, good sized smacks, rather ketches.

Mr. WALTER ARCHER is re-called; and further Examined as follows:—

Chairman.

2545. I think since you were last examined before this Committee you have made some further inquiries as to the effect of a size limit of fish on the reduction of profit to vessels fishing on the eastern grounds?—Yes.

2546. Could you just briefly put in what the result of those further inquiries has been?—Yes. I find that assuming that plaice under 11 in. were worth as much per cwt. as so-called small plaice, the reduction in the value of the total catch was in 1902, 54 per cent., and in 1903, 40 per cent. If it were known, however, that the boxes of so-called small plaice contained no fish under 11 in., it is possible they might be worth more than they are at the present time; a calculation has, therefore, been made of the reduction in profit assuming that fish over 11 inches contained

Earl of Yarborough—continued.

2544. Is there any shrimping?—Yes, there is shrimping.

The Witness is directed to withdraw.

Chairman—continued.

in those boxes were worth as much as medium-sized plaice. On this, in 1902, the reduction would have been 40 per cent., and in 1903, 29 per cent. I have a brief statement showing the assumption basis on which these calculations are based.

2547. Will you hand it in?—Certainly. (*Handing in the same.*)

2548. Therefore if you assign the highest and lowest possible value to fish under 11 in. the reduction on the total catch of 1902 was between 54 and 40 per cent., and in 1903 between 40 and 29 per cent.?—Yes.

2549. And under these circumstances, in your opinion, it would not be worth while for steam trawlers to go to the Eastern grounds, if those calculations are correct?—No.

The Witness is directed to withdraw.

SIR THOMAS ELLIOTT, K.C.B., is recalled; and further Examined as follows:—

Chairman.

2550. You have had a considerable length of experience in more than one public department, I think, and are probably familiar with what is known as subordinate legislation; that is to say, legislation by regulations and orders of Government Departments acting under enabling powers conveyed by Parliament itself. Could you give the Committee a definition of what I may call a subordinate legislation?—The term “subordinate legislation” was a term I think first used by Sir Courtenay Ilbert, lately the Parliamentary Counsel, and now Clerk of the House of Commons, who has defined the term as meaning that part of the law which is enacted not directly by the Supreme Legislature, but under delegated powers.

2551. Can you state what are the advantages over direct legislation of a delegation of such powers?—I think those advantages are mainly of an administrative character. Every administrative change is in the nature of an experiment, and, as Sir Courtenay Ilbert has stated, “The precise mode in which the change will work out, the exact means by which its object can best be effected, cannot be determined with certainty beforehand, and consequently the machinery must be made elastic. This elasticity can best be given by allowing the details to be worked out on the general lines laid down by the Supreme Legislature either by statutory rules or by official practice.”

2552. Are there certain safeguards which have been provided by Parliament against any abuse of the powers of such subordinate legislation?—Perhaps, in reply to that question, I might be allowed to say that jurists attach by far the

Chairman—continued.

greatest importance to the check on the practice of public departments which is afforded by the expression of public opinion, which often, as your Lordship knows, takes the form of questions and proposals and criticisms in Parliament. Sir Courtenay Ilbert, if I may quote him again, states that “in a country like modern England public opinion is the most effectual, and is usually a sufficient safeguard against any serious abuse of statutory powers.”

2553. Of course, the exercise of all the powers is done under the direction of a responsible Minister, who is responsible to Parliament?—That is so, of course.

2554. And whose actions can be criticised in Parliament?—Yes.

2555. Then, would you kindly give the Committee some illustrations of existing cases of subordinate legislation by which powers have been entrusted to public departments?—Perhaps in the first instance I may refer to certain acts which are the subject of Orders made by the Home Office, by the Secretary of State. The Factory and Workshop Acts all contain such powers, and the 1901 Act, which takes the place of the earlier Acts, enables the Secretary of State to make Orders dealing with the sanitary condition of factories, hours of labour, fitness for employment, dangerous and unhealthy industries, limits of humidity and work at home. It will be seen that the powers of the Secretary of State under these sections are very wide; the examples to which I refer are those recent Orders which deal with the use of lead glaze, and those also which deal with the air space of bakehouses. Then, under the Coal

Mines

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Sir T. ELLIOTT, K.C.B.

[Continued.]

Chairman—continued.

Mines Regulation Act, the Secretary of State also has powers to make Orders or rules for securing the safety of mines, use of lamps, description of explosives to be used, etc.; and there are similar powers under the Metalliferous Mines Act, the Quarries Act, the Explosives Act, and the Wild Birds Protection Act.

2556. Then as to the Local Government Board, what is the case?—The Local Government Board has few powers, I think, of making any direct Orders; but one conspicuous example of the subordinate legislation effected by the Local Government Board is the Orders they make with regard to dairies, cowsheds, and milkshops under the provisions of the Contagious Diseases (Animals) Act.

2557. Then what powers have the Board of Trade?—The Board of Trade have considerable powers of subordinate legislation. Possibly the best example of those powers is afforded by the Railway Employment (Prevention of Accidents) Act, 1900, under which the Board are empowered to make rules with respect to brake levers, labelling wagons, movement of wagons, lighting of stations, and other matters of that kind. The Board of Trade have also powers, under the Merchant Shipping Act, under which they can make regulations as to examinations for certificates of competency as to survey of ships, and as to the making of load lines, and tables upon which load lines are to be calculated, and other matters of that kind.

2558. And in your own department you have the Diseases of Animals Act, under which you have very wide powers for making Orders?—That is so, of course.

2559. And I think you gave evidence on the former occasion that you believe those Orders were administered in accordance with the wishes and with the entire concurrence of the community whose interests are dealt with?—I believe that to be so; in fact, I may go further, and I would say that any suggestion that those powers should be taken away from the Board of Agriculture would be received with very serious objection, and criticism by the agricultural community.

2560. And you have no reason to believe that there will be any difficulty in carrying with you the fishing interest in the making of Orders under the Bill now before their Lordships?—I believe now that we have a Board of Fisheries; the Minister in charge of the Board of Fisheries, as the head of the Board of Fisheries, will take very good care not to go contrary to the best and general trade opinion on subjects of this kind.

2561. A good deal of evidence has been given before this Committee since you were first called on the general subject of what the orders of the Board should be, and how much and how little they would harass or regulate the trade. We were told by representatives from Hull and from Grimsby, that what they desired was in effect a self-denying ordinance, that is to say, such an order as would prevent them, by making it not worth their while to go to certain eastern grounds for the purpose of catching undersized fish; and

Chairman—continued.

the particular kind of fish principally dealt with was the plaice. Do you think that the first Order of the Board might in the first instance be limited to plaice?—I think all the discussion which has taken place on the subject distinctly points to that conclusion.

2562. And do you think it would be possible to make an order which, while restricting the operations of steam trawlers would not affect the position of the smaller sailing trawlers up to about 60 or 65 tons, which I think in the evidence given yesterday was the maximum of the trawlers plying from Brixham, Yarmouth, Ramsgate, and Lowestoft?—Yes, undoubtedly, our first action would be, I think, to give effect to the wishes of the trade as regards the fishing on the eastern grounds; and in order to give effect to those wishes I do not think it would be necessary to interfere with the fishing nearer the east coast carried on in vessels of the sizes to which your Lordship has referred.

2563. Still less would it interfere with the small shrimpers who practically go but a few miles from the coast?—Certainly. The whole object of the Bill is to enable a distinction to be drawn between such fishing as shrimping, or, as I ventured to say to the Committee, the catching of small fish from the pier head, and the great trawling industry, which has such serious effect upon these eastern grounds.

2564. Then with regard to the size of the plaice, 8in. was, as you are aware, the size limit proposed in 1900; but much evidence has been given before the Committee to the effect that that would not be sufficient to prevent the trawlers from going to the eastern grounds. Do you think that any hardship would be worked if by Order of the Board the size of plaice in the first instance were limited to 11in.?—No, if provision were made for drawing a distinction between the classes of vessels by which the fish are caught.

2565. And that could perfectly well be done by Order of the Board?—That is so. I think a limit of 11in. without distinction as regards the classes of vessels might be productive of harm; but that the Order as a whole might be so framed as to do no injury to the small inshore fishing interest.

2566. Then as regards the ports, that might be a matter for careful consideration after the Board has ascertained what are the various sizes of the vessels in the different ports; but presumably you think that there would be no hardship in making the Order apply, in the first instance, to all the ports all round the coast?—My impression is that no hardship would arise, and that there would be considerable danger attaching to any attempt to draw a distinction between one port and another. I should attach much more importance to drawing a distinction as between the classes of vessels which fish from the ports.

2567. Of course there would be a danger that if you restricted it to certain ports, vessels might still go to these eastern grounds and land their catches in ports which were not subject to the order

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Sir T. ELLIOTT, K.C.B.

[Continued.]

Chairman—continued.

Order?—Yes, I am afraid our Order would for that reason prove ineffective.

Duke of Abercorn.

2568. Would you recommend uniformity of bye-laws throughout the coasts?—I think there is always very much to be said in favour of uniformity. I am not, I think, sufficiently conversant with the particular circumstances of the different portions of the coast to say whether it would be possible in this matter, but undoubtedly it is usual that the central authority should have the power to guide legislation of this kind on identical lines.

2569. And when you refer to the different classes of vessels, are you referring to the distinction between steam trawlers and the in-shore fishing sailing trawlers?—Yes, that was one of the distinctions I had in my mind; that a vessel propelled by steam power would be able to go much further afield, obviously, than a sailing vessel, and that is why in wishing to protect the eastern grounds it would be one of the distinctions to be kept in mind. We should then also have to consider, of course, the distinction between the sizes of the vessels; it is quite obvious that a small fishing vessel could not possibly sail from these shores to the eastern grounds.

Lord Tweedmouth.

2570. When you speak about the best and general trade opinion, I suppose you have realised that it is a little difficult to get that in the case of fishing—there are such varying interests. What one set of fishermen thinks splendid, another set of fishermen thinks equally objectionable?—That of course, is so. On the other hand, where you have a department in close touch with an industry as the Board of Fisheries wishes to come in close touch with the fishing industry, we do get opportunities of weighing opinions as well as counting heads. I do not think in regard to agriculture we have had any difficulty in ascertaining what agricultural opinion is, and I do not anticipate any difficulty in regard to ascertaining the opinion of the fishing industry.

2571. I do not think you have such sharp lines of difference between agriculturists as you have between fishermen?—With deference I should have said that there are many very different classes of agriculture and agriculturists, and that it is

Lord Tweedmouth—continued.

almost as difficult to predicate any general proposition of agriculture as it is of fishing.

2572. But bearing in view the fact, as I think at any rate, that there are great differences in different classes of fishermen, do not you think the purposes of this Bill would be perfectly met by only attempting to deal with one class of the fishing trade?—I think it would make further action in the direction contemplated by this Bill very difficult, and it may easily be that there may be a growth of public opinion, even on the part of the smaller interests, as regards legislation of the kind.

2573. Although you have had considerable difference made between steam vessels and sailing vessels with regard to previous legislation, both in Scotland and in England; I mean that a very distinct line has been drawn between them?—I think it would be impossible to legislate in such a way as to prevent steam vessels going, for instance, to these eastern grounds unless there was some means also of preventing the larger sailing vessels from going. I tried to indicate in my replies to his Lordship in the chair that both distinctions would have to be kept in view.

2574. But how would this meet the case? When the sailing trawlers go to these distant grounds the fish are brought to port in steam carriers; and what rather runs in my mind is, that it would be possible to limit the operations of the Bill to fish landed from steam vessels; that is to say, either from steam trawlers themselves or steam carriers?—I am afraid it would give rise to evasions and objections. Fish might then be brought under certain circumstances by sailing vessels. I do not think that a limitation of that kind would enable the Board to do justice and to comply with the wishes of the trade as a whole.

Chairman.

2575. As a matter of fact, are all the sailing vessels served by steam carriers?—I think not.

2576. Many of them bring their own fish to port?—I believe that is so.

2577. Therefore unless you applied the Order to the larger sailing vessels as well as the carriers, much small fish might be caught in certain parts and brought in by the sailing vessels themselves?—I feel sure that any Orders on those lines would be received with great opposition by the trade.

The Witness is directed to withdraw.

MR. GEORGE DOUGHTY (a Member of the House of Commons) is further Examined; as follows:—

Chairman.

2578. You were good enough to give me some evidence at the opening of this Inquiry, and I think you have paid close attention to the proceedings which have been going on. Might I ask whether you would now state to the Committee what, in your opinion, are the indispensable limitations which you think ought to be imposed in the Bill, and how far you think it would be safe to leave other limitations to be imposed by (0.10.)

Chairman—continued.

Order?—When I gave evidence before the Committee before, I had not at that time had an opportunity of consulting the representative people of the trade at Grimsby. Since then I have attended a very large meeting of those who are greatly interested in this business, and they almost unanimously support the suggestions which I put before you when I last gave evidence. I think we all desire, as the ultimate end of legis-
T
lation,

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Mr. DOUGHTY (a Member of the House of Commons).

[Continued.]

Chairman—continued.

lation, an international agreement and international action in respect to the prevention of the destruction of undersized fish. I was very much impressed by the evidence of Mr. Archer. I may say, on that point, and, to some extent, I think it is only fair that, as we are the very large catchers of fish, I suppose 75 to 80 per cent. of the catching power, especially large catching power, is vested in Great Britain, it is only right that we should set an example, if there has been or is any likelihood that such encouragement as that would lead to international agreement. Now, what fell from Mr. Archer, and what I find in his evidence, indicates, I think, somewhat strongly, that at the convention at Hamburg, a few weeks ago, this question was considered, and it appears sympathetically considered; and as there does seem to be a very reasonable hope, to say the least of it, that if we do something here, they will very likely be induced to follow our lead, it seems to me that legislation of this character, to that extent, should be encouraged; so that I support the Bill as a step in that direction, and hope that it may lead eventually to a complete agreement with all the powers bordering on the North Sea. The main point that I tried to impress upon the Committee the last time when I was here was that, in my judgment, it was necessary that there should be some statutory limitations to the power given to this Department. I know how well and wisely departments have served different interests in the past, but I always have looked with a very great deal of jealousy upon the question of handing over, almost without any restriction whatever, any great industry to a department, and taking the power, so to speak, for the time being at least, out of the hands of Parliament; and therefore I am afraid I must say that the opinion of my constituents is unanimous on that one point, namely, that the powers in this Bill should be limited to the five months which I have indicated, namely, April, May, June, July, and August. And we think so, not merely because we are afraid that probably by any other means, owing to the influence that might be brought to bear upon the Board at some time, injury might be done to the trade, but because we believe that all practical knowledge of the question and experience up to the present point to the destruction being in those five months, and that, if you restrict the sale of small fish during those five months you will almost to the full extent cover the evil that is complained of. In the figures, for example, that your Department have already supplied to the Committee, you will find that the months in which the small fish are caught are the five months that I refer to; and we think that the period during which your Department should have a roving commission should be those five months. I think, therefore, that if the Bill limited the period of time to those five months, anyhow, for a start, we should be able to see to what extent a restrictive power of that kind would be of value. Moreover, if I may put it shortly in this way, if it is for the five months, I think there would not be the same fear, even if you made the size limit a very con-

Chairman—continued.

siderable one, say, for three of those months; and if you are to create a close season on these eastern grounds, it seems to me that this is the only effective way in which it can be done, namely, by making the size limit, for certain months, anyhow, such a size that it would not be profitable for anybody to go on to those grounds. That is a point, I think, of some importance, which I daresay will weigh with you, my Lord, when you are thinking over the question of what the first Order should be.

2579. You agree, I think, do you not, that 11 in. would, as at present advised, be a sufficient limit for plaice?—Yes. At the Conference that I held at Grimsby the other day, there was a general, indeed a unanimous, expression of opinion that 11 in. is the size to which it would be safe to go. Of course that is a considerable advance on what has been said in years gone by.

2580. At the same time, it is conceivable, is it not, that if the result of this legislation is effectual the size of plaice all round the coasts of the Continent may attain a higher average, and then it might be desirable to increase the limit?—Yes; and then I have not the slightest doubt that the trade itself, having realised how great the advantage has proved, would come to you and say, "We think this limit should be larger."

2581. I do not know whether you are aware that we have been informed by Mr. Holt, whose investigations have covered a very long space of time, that in his opinion there has been a marked change in the average size of fish in the North Sea, owing to the amount of fishing, and that in his opinion that change might possibly revert again to the old conditions on those grounds. Under those circumstances, do you think there would be an additional advantage in reserving to the Board some latitude?—Well, so far as any suggestion I have made up to the present goes, they would have full latitude. I do not desire, I do not think it would be wise, that there should be any restriction put on the size of the fish; it is a limitation of time that I suggest.

2582. May I ask you, is there not a practical difficulty in sorting fish during the winter months?—Yes. But will the Committee look at it in this light. The trade I represent, you see, is, I may say, different in some respects from that of any other port round the coast. Out of Hull (and the Hull people have given most enthusiastic support to this Bill in its entirety, I may say) it does not affect them in the same way. There the two great industries are fleeting on the one hand; and fishing very largely to the north on the other; that is to say, they are single boaters mainly. They nearly all work Iceland, the Faroes and the islands in that direction, and, therefore they would not be affected at all by any restriction of that kind. Then the fleets only come on to these small plaice in summer time, when they come down like a lot of wolves and gobble up everything, and ruin the market all round the country; then they stop off a month, and then go back for another fortnight. But in the winter time,

18 March 1904.]

Mr. DOUGHTY (a Member of the House of Commons).

[Continued.]

Chairman—continued.

time, or as soon as September gets here, and the five or six months that follow, it would not affect them, because where our men work on single boats, being on the small grounds where the fleets would not go; our men work these particular places, and they have to hold their gear anyhow every hour and a-half, or three hours at the very outside; whereas the fleet of vessels work all the night through with simply one haul. Now I put it to anyone, in winter time, for example, on dark nights, with a bit of a breeze on or a strong wind, how is it possible for a fisherman, having to haul his gear, say, once in every three hours, to sort these fish out at all in such conditions as obtain there? It cannot be done.

2583. What does he do in practice—shovel it all just as it is into the trunks?—They do the best they can with it, get it down below and into the ice as best they can. But under such conditions of weather as obtain there, it would be impracticable to do it; and, further than that, there is not a very large proportion of small plaice amongst the fish they catch at that time; perhaps not more than 10, 15, or 20 per cent. of it all makes good money at the market in those months, when it is caught under such conditions. I think to prevent its being bought in and sold would be an injury both to the consumer and the producer.

2584. Then I think I may gather that you would wish, while leaving as much latitude to the Board as possible to meet changing conditions, that Parliament should have the utmost possible supervision over the action of the Board, consistently with allowing it such latitude that it would

Chairman—continued.

not be necessary to propose a Bill in Parliament to carry out every change?—Yes, certainly; that is very important. I suppose every Order that the Department might make would have to lie for so many days on the Table of the House?

2585. You are asking me questions?—I do not know myself.

2586. No, not of necessity. It might be done, but not of necessity. I think it is open to consideration.

Marquess of Huntly.

2587. Did you say that 11 in. was the limit that you thought would be a proper one for plaice?—I think that for plaice 11 in. would be a fair limit, anyhow, to start with.

2588. That, you think, would make it unprofitable for them to go to these eastern grounds?—Yes.

Lord Tweedmouth.

2589. Would you confine it entirely to plaice?—No, I would admit brill and turbot.

2590. And soles?—No, not soles.

2591. You would have a limit for soles?—Yes, I think for soles it should be 10 in.; that is what the trade thought in Grimsby.

2592. The last witness, I think, and our Chairman also, seemed to think that the Order in the first instance might be confined to plaice only?—I think it must be confined, if I may be allowed to suggest it, to all flat fish.

2593. To those four flat fishes, at any rate, brill, turbot, plaice, and soles?—Yes.

Ordered—That this Committee be adjourned.

A P P E N D I X.

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APPENDIX.

APPENDIX A.

PAPER handed in by Sir THOMAS ELLIOTT, K.C.B.

TABLE I.

QUANTITY, VALUE and AVERAGE PRICE of the classes of FISH mentioned in the BILL, landed on the Coasts of England and Wales, from 1890 to 1903.

YEAR.	Quantity.				Value.				Average Price per Cwt.					
	Brill.		Turbot.		Plaice.		Turbot.		Plaice.		Turbot.		Plaice.	
	Cwts.	Soles.	Cwts.	Turbot.	Cwts.	Brill.	Soles.	Turbot.	£	Brill.	Soles.	Turbot.	£ s. d.	Plaice.
1890	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1890	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1891	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1892	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1893	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1894	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1895	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1896	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1897	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1898	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1899	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1900	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1901	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX A—continued.

TABLE II.

QUANTITY and AVERAGE PRICE of Brill, Soles, Turbot, and Plaice landed on the coasts of England and Wales in the period 1890-96 compared with 1897-1903.

(a) Quantity.

Description of Fish.	1890-96.	1897-1903.	Total.	Percentage of each kind.
	cwts.	cwts.	cwts.	
Brill	125,345	150,195	275,540	2·04
Soles	556,829	532,834	1,089,663	8·07
Turbot	479,507	440,395	919,902	6·81
Plaice	5,240,659	5,980,007	11,220,666	83·08
Total	6,402,340	7,103,431	13,505,771	100·004

(b) Average price per cwt.

Description of Fish.	1890-96.	1897-1903.	Increase per cent.
	£ s. d.	£ s. d.	per cent.
Brill	2 10 4	2 13 8	6·62
Soles	6 11 8	7 2 1	7·91
Turbot	3 13 10	3 18 7	6·43
Plaice	1 0 1	1 1 4	6·22

APPENDIX A —continued.

TABLE III.

(From "Verslag van den Staat der Nederlandsche Zeevisscherigen, 1902.")

HOLLAND (Port of Ymuiden only).

Flat-fish taken in the North Sea.

Description.	1900.		1901.		1902.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Baskets.	£	Baskets.	£	Baskets.	£
Turbot	1,590	3,452	2,400	5,297	5,225	10,880
Brill	672	797	958	1,238	2,218	2,818
	Number.		Number.		Number.	
Soles, Large	65,353	4,467	88,772	6,529	129,721	8,962
„ Medium	110,219	4,875	123,920	5,850	161,041	6,668
„ Small	190,923	3,420	200,328	4,082	429,132	5,773
	Baskets.		Baskets.		Baskets.	
Plaice, Large -	609	672	697	717	1,930	1,912
„ Medium	2,972	1,995	4,544	2,907	7,200	4,401
„ Small	54,189	10,079	94,467	17,401	179,152	29,658
Dabs	26,345	4,024	37,481	5,263	51,873	6,221
Flounders	757	244	2,091	563	2,932	694

Flat-fish from Iceland and Faroe.

Description.	1900.		1901.		1902.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Baskets.	£	Baskets.	£	Baskets.	£
Plaice, Large -	—	—	1,434	401	418	118
„ Medium	—	—	52	20	32	13
„ Small	—	—	6	1	11	3
Dabs	—	—	—	—	11	2

A basket is equal to about $\frac{1}{2}$ cwt.

APPENDIX A—*continued*.

TABLE V.

Extracted from "Fiskeri-Beretning 1901-1902."

Denmark (West Coast).

Value of Flat-fish.

District.	Value.	
	Average 1891-1901.	1901.
	£	£
Skagerrak Fisheries	1,361	1,136
North Sea " (North of Horns Reef)	689	1,012
" " (South of Horns Reef)	11,111	27,931
West Coast Total	13,161	30,079

QUANTITY and Value of Flat-fish included in the above Table for 1901.

DESCRIPTION.	Skagerrak Fisheries.		North Sea Fisheries, North of Horns Reef.		North Sea Fisheries, South of Horns Reef.		Total—West Coast.		Proportion of Total Value of Catch of all kinds of fish.
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
		£		£		£		£	Per cent.
Plaice (cwts.)	248	183	—	—	50,390	27,683	50,638	27,866	52.6
" (number)	112,280	692	600	2	20,000	51	132,880	745	
Turbot or Brill (cwts.)	16	24	—	—	—	—	16	24	
Halibut (cwts.)	182	164	336	782	—	—	518	946	1.8
Sole (cwts.)	25	70	—	—	63	197	88	267	.6
Skates or Rays (cwts.)	11	2	—	—	—	—	11	2	
" (number)	30	1	7,663	228	—	—	7,693	229	.5
Total	—	1,136	—	1,012	—	27,931	—	30,079	

APPENDIX A—continued.

TABLE VI.

STATEMENT of Quantity of Plaice landed at Bremerhaven and Geestemünde in 1903.

Month.	Bremerhaven.		Geestemünde.	
	Large.	Small.	Large.	Small.
	cwts.	cwts.	cwts.	cwts.
January	21	142	252	561
February	9	27	137	298
March	6	127	127	1,170
April	11	212	146	1,131
May	5	116	82	1,331
June	2	244	62	1,399
July	9	292	262	1,508
August	27	439	510	1,842
September	26	228	686	1,813
October	26	195	272	1,261
November	17	91	233	1,863
December	46	76	352	483
Total	205	2,189	3,121	14,660

APPENDIX A—continued.

TABLE VII.

TABLE showing the nature of the employment in 1893, 1899, 1900, 1901 and 1902 of the first-class Boats (*i.e.*, 15 tons and upwards) registered under the Sea Fisheries Act, 1868 (now, under Part IV. of the Merchant Shipping Act, 1894), at each Port in England and Wales and remaining on the Register at the end of those years.

Year.	Sail or Steam.	1st Class.								Total.
		Trawl- ing.	Trawl- ing, etc.	Nets.	Lines.	Dredg- ing.	Nets, Lines, Dredges, etc.	Others.	Not Em- ployed.	
1893.	Sailing Vessels	2,037	81	667	185	93	105	1	101	3,270
	Steam Vessels	480	15	4	56	2	4	—	3	564
	Total	2,517	96	671	241	95	109	1	104	3,834
1899.	Sailing Vessels	1,134	65	659	62	71	115	13	76	2,195
	Steam Vessels	1,009	17	16	67	4	2	1	5	1,121
	Total	2,143	82	675	129	75	117	14	81	3,316
1900.	Sailing Vessels	925	56	613	47	57	108	53	76	1,935
	Steam Vessels	1,104	10	47	63	4	3	—	10	1,241
	Total	2,029	66	660	110	61	111	53	86	3,176
1901.	Sailing Vessels	820	37	588	59	50	120	57	62	1,793
	Steam Vessels	1,096	8	105	70	4	11	1	5	1,300
	Total	1,916	45	693	129	54	131	58	67	3,093
1902.	Sailing Vessels	807	36	572	44	50	138	36	68	1,751
	Steam Vessels	1,096	10	177	67	4	11	1	7	1,373
	Total	1,903	46	749	111	54	149	37	75	3,124

The registered tonnage of the first-class boats engaged in trawling was as follows :—

Year.	Steam.		Sailing.		Total.
	Tons.	Average tonnage.	Tons.	Average tonnage.	Tons.
1893	19,030	39.6	116,971	57.4	136,001
1899	54,063	53.5	50,814	44.8	104,877
1900	60,706	54.9	38,033	41.1	98,739
1901	60,742	55.4	33,257	40.5	93,999
1902	61,731	56.3	32,286	40.0	94,017

APPENDIX A—continued.

TABLE VIII.

STATEMENT showing the Number of Steam Trawlers belonging to each Country fishing from North Sea Ports.

	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
GREAT BRITAIN :															
England* .	—	—	—	—	—	448	—	—	—	—	—	957	1040	1026	1024
Scotland† .	—	—	—	—	—	72	77	77	72	81	107	159	180	206	227
Belgium‡	—	—	—	—	—	—	—	—	—	—	—	—	—	26	22
Denmark‡	—	—	—	—	—	—	—	—	2	3	3	3	3	3	1
France‡	—	—	—	—	—	—	—	—	—	—	—	—	—	19	3
Germany‡	5	8	13	18	32	54	62	65	85	105	120	123	124	120	119
Netherlands‡	—	—	—	—	—	—	—	—	—	—	2	12	21	24	29

* Particulars furnished by the Registrar-General of Shipping and Seamen. The figures previous to 1893 and for 1894 to 1898 are not readily available.

† Particulars taken from 12th to 21st Annual Reports of Fishery Board for Scotland. The figures previous to 1893 are not available in a form comparable with those for subsequent years.

‡ Particulars taken from 17th Annual Report of Inspectors on Sea Fisheries (E. and W.).

APPENDIX B.

PAPER handed in by Sir THOMAS ELLIOTT, K.C.B.

TABLE I.

QUANTITIES and VALUES of FISH imported into the UNITED KINGDOM from FOREIGN COUNTRIES and BRITISH POSSESSIONS, in each year from 1893 to 1902.

(Extracted from the "Annual Statements of Trade.")

- I. Fresh Fish—Herrings
 - II. Fresh Fish—Other sorts.
 - III. Shell Fish—All kinds.
 - IIIA. Shell Fish—Oysters.
 - IV. Cured Fish—Sardines.
 - V. Cured, Salted, or Canned Fish—Except Sardines.
 - VA. Cured, Salted, or Canned Fish—Except Sardines. Detailed figures for 1901 and 1902.
 - VI. Imports at certain ports, 1901-1903.
 - VII. Summary Table—Value of all kinds of Fish imported from each Foreign Country and British Possession.
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APPENDIX B.

PAPER handed in by Sir THOMAS ELLIOTT, K.C.B.

I. Fresh Fish—Herrings.

Countries.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Sweden - - -	407,923	722,063	505,854	378,139	67,871	175,467	81,347	1,819	16,320	5,346
£.	65,065	75,572	71,680	47,748	19,555	38,041	22,001	822	6,050	2,060
Norway - - -	250,754	222,447	245,993	384,681	458,934	784,624	590,223	299,448	426,539	407,876
£.	48,303	38,369	43,541	68,897	114,306	173,540	178,257	127,678	148,155	148,389
Denmark - - -	2,867	6,395	15,508	8,703	455	—	—	—	—	—
£.	873	1,525	4,197	2,194	146	—	—	—	—	—
Other Foreign Countries - -	2,953	5,422	243	2,068	779	6,205	2,947	1,115	1,060	824
£.	663	913	146	551	390	2,342	1,187	744	550	463
Total - - -	724,497	956,327	767,308	773,591	528,039	966,296	674,517	302,382	444,119	414,946
£.	114,904	116,379	119,564	119,390	134,397	213,923	201,445	129,244	154,755	150,912
British Possessions - - -	80	—	—	—	—	98	102	—	21	952
£.	30	—	—	—	—	33	58	—	27	486
Total - - -	724,577	956,327	767,598	773,591	528,039	966,394	674,619	302,382	444,140	414,998
£.	114,934	116,379	119,564	119,390	134,397	213,956	201,503	129,244	154,782	151,398

APPENDIX B—*continue*.

II. Fresh Fish—Other than Herrings.

Countries.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Sweden - - - £	1,857 3,418	5,133 1,252	5,657 2,903	5,914 1,958	2,831 2,848	1,013 3,510	727 287	2,306 1,222	1,199 2,443	148 341
Norway - - - £	41,567 65,677	40,545 54,229	26,946 55,775	33,087 70,367	38,508 109,356	50,995 127,656	37,769 65,251	44,690 93,453	61,963 131,112	44,417 90,069
Denmark - - - £	29,683 21,751	31,225 24,180	27,083 21,864	64,472 37,447	45,738 33,388	38,192 30,543	72,658 50,306	62,364 66,707	* 51,406 52,742	† 37,430 38,337
Germany - - - £	26,287 19,928	39,302 35,764	15,883 24,010	12,541 17,910	29,038 22,251	52,218 26,359	30,449 17,279	17,510 16,068	9,143 13,244	2,071 7,005
Holland - - - £	115,002 230,547	103,827 206,656	102,005 198,354	108,146 210,841	94,598 184,932	93,268 177,519	81,235 155,799	68,843 134,226	70,928 133,611	64,363 120,851
Belgium - - - £	1,916 7,956	4,875 10,656	4,470 9,196	5,460 13,463	8,419 17,149	14,520 34,574	15,094 32,477	22,599 44,980	17,351 34,927	15,005 33,072
France - - - £	20,225 75,050	15,048 47,058	8,522 29,677	7,377 29,852	7,378 27,048	8,947 25,165	8,362 20,292	5,571 22,156	4,692 18,723	6,348 24,117
Italy - - - £	- - -	667 568	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
United States - - - £	41 25	372 1,525	305 815	1,322 2,065	5,270 16,466	2,678 8,350	2,448 7,799	584 1,500	4,113 12,479	4,533 11,817
Other Foreign Countries - - - £	- - -	- - -	- - -	- - -	- - -	2 5	- - -	186 900	23 45	1 2
Total - - - £	236,578 424,332	241,084 381,888	191,561 342,594	238,319 383,903	231,783 413,438	211,833 433,681	248,742 338,490	224,743 381,212	220,818 399,346	174,316 326,211
Australasia - - - £	- - -	- - -	904 1,922	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Canada - - - £	- - -	293 874	- - -	189 887	254 753	3,025 10,167	1,094 3,918	2,082 3,990	1,135 2,796	639 2,290
Other British Possessions - - - £	- - -	95 137	80 213	207 277	62 238	232 669	189 371	273 542	719 1,890	59,020 62,410
Total - - - £	132 454	388 1,011	984 2,135	396 1,164	316 991	3,277 10,836	1,283 4,289	2,355 4,532	1,854 4,686	59,659 64,700
TOTAL - - - £	236,730 424,786	241,472 382,899	192,545 344,729	238,715 385,067	232,099 414,429	265,110 444,517	250,025 362,779	227,098 385,744	222,672 404,012	233,975 390,911

* Including 8,595 cwts. from Ireland and Greenland, value £19,241. † Including 40 cwts. from Iceland and Greenland, value £160.

APPENDIX B—continued.

III. Shell Fish—All kinds.

(For imports of Oysters, first shown separately in 1896, see next Table.)

Countries.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Norway	Cwts. 1,673 3,551	Cwts. 1,906 4,260	Cwts. 2,152 4,044	Cwts. 2,194 3,819	Cwts. 746 2,034	Cwts. 346 841	Cwts. 1,434 2,671	Cwts. 283 1,424	Cwts. 740 3,992	Cwts. 238 872
Holland	132,808 68,122	114,355 60,417	102,094 51,597	155,656 65,091	134,493 56,103	118,993 60,600	137,322 55,288	154,264 55,133	130,838 56,140	97,298 52,991
Belgium	—	—	—	138 56	722 1,453	329 646	76 137	432 100	503 118	—
France	42,510 86,642	49,967 93,538	33,868 (9),297	55,089 116,792	47,735 114,463	45,801 97,395	44,677 107,526	22,636 57,150	15,720 52,218	16,048 42,665
United States	134,083 90,291	156,632 107,441	132,569 89,485	154,524 103,182	136,755 93,867	135,143 89,547	148,829 99,949	144,754 96,825	127,311 88,678	120,816 81,719
Other Foreign Countries	2,334 1,737	1,502 2,155	2,179 967	2,027 869	2,113 1,517	3,666 3,204	2,106 4,924	4,527 5,151	2,709 3,120	6,813 5,042
Total	313,408 250,343	324,362 267,811	272,862 215,390	369,628 289,809	322,564 269,477	304,278 252,233	334,444 270,495	326,896 215,783	277,821 204,266	241,213 183,289
Channel Islands	—	—	—	472 764	535 1,542	640 2,347	378 876	22 100	75 335	33 115
British West India Islands	2,364 9,320	2,674 9,700	2,275 8,697	2,367 10,167	2,447 9,452	2,728 10,894	2,284 9,109	2,731 10,184	2,738 9,732	3,036 11,294
Other British Possessions	1,101 2,051	782 1,448	597 831	223 527	635 1,852	967 1,201	326 1,045	198 538	56 84	413 453
Total	3,465 11,371	3,456 11,148	2,872 9,528	3,062 11,458	3,617 12,846	4,335 14,442	2,988 11,030	2,951 10,822	2,869 10,151	3,482 11,862
Total	316,873 261,714	327,818 278,959	275,734 224,918	372,690 301,267	326,181 282,323	308,613 266,675	*337,432 281,525	*329,847 226,605	*280,690 214,417	*244,695 195,151

* Exclusive of Oysters imported for breeding purposes (first shown separately in 1899) which are shown only by value (see next table). The values are inclusive of Oysters for breeding.

APPENDIX B—continued.

III.A. Shell Fish—Oysters.

NOTE—Oysters were first shown separately in 1896, and 'Oysters for Breeding' in 1899; the latter being entered by value only, values are shown throughout the table for comparative purposes.

Countries.	1896.		1897.		1898.		1899.		1900.		1901.		1902.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Cwts.	£.	Cwts.	£.	Cwts.	£.	Cwts.	£.	Cwts.	£.	Cwts.	£.	Cwts.	£.
Holland	8,009	33,030	9,393	26,738	10,514	30,108	6,491	19,218	5,011	15,023	6,720	20,844	6,553	20,856
France	—	—	—	—	—	—	44,677	103,296	22,636	46,595	15,720	39,802	16,048	41,839
Food	—	—	—	—	—	—	—	4,230	—	10,555	—	12,416	—	826
Breeding	55,089	116,792	47,735	114,463	45,801	97,395	—	107,526	—	57,150	—	52,218	—	42,665
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
United States	—	—	—	—	—	—	148,820	99,924	144,651	96,279	127,229	84,322	120,602	79,063
Food	—	—	—	—	—	—	—	—	—	—	—	3,845	—	2,250
Breeding	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	152,282	100,924	136,745	93,812	135,037	89,245	148,820	99,924	144,651	96,279	—	88,167	—	81,313
Other Foreign Countries	—	—	—	—	—	—	1,284	4,212	3,727	3,045	2,032	1,621	5,893	4,308
Food	—	—	—	—	—	—	—	212	—	1,617	—	1,095	—	—
Breeding	557	218	645	612	2,696	2,607	—	4,424	—	4,662	—	2,716	5,893	4,308
Total	—	—	—	—	—	—	201,272	226,650	176,025	160,942	151,701	146,589	149,096	146,066
Food	—	—	—	—	—	—	—	4,442	—	12,172	—	17,356	—	3,076
Breeding	215,937	250,964	194,518	235,625	194,048	219,355	—	231,092	—	173,114	—	163,945	—	149,142
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
British Possessions	115	129	42	53	747	528	39	54	48	44	44	52	58	50
Food	—	—	—	—	—	—	201,311	226,704	176,073	160,986	151,745	146,641	149,154	146,116
Breeding	—	—	—	—	—	—	—	4,442	—	12,172	—	17,356	—	3,076
Total	216,052	251,093	194,560	235,678	194,795	219,883	—	231,146	—	173,158	—	163,997	—	149,192

APPENDIX B—continued.

IV. Cured or Salted Fish—Sardines.

Countries.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Norway	217 605	291 646	726 1,508	395 1,296	300 507	2,636 6,208	1,676 4,446	911 2,179	9,467 26,171	15,720 41,667
Belgium	1,087 2,057	81 204	933 2,152	1,270 3,010	421 865	7,653 10,382	9,664 12,271	4,637 7,037	3,182 5,108	3,203 5,754
France	72,259 346,200	50,417 234,471	55,775 260,983	64,922 303,779	71,590 331,293	72,126 326,805	97,317 437,858	92,650 425,241	85,789 388,294	55,191 251,615
Austrian Territories	—	—	540 1,460	—	—	—	—	—	—	—
Italy	30 38	—	46 92	347 1,848	83 178	75 200	226 382	52 150	—	—
Spain	2,525 5,270	2,779 6,384	10,706 18,067	12,451 17,956	13,384 23,575	15,796 31,202	12,418 21,730	10,670 26,101	15,902 33,369	10,738 23,949
Portugal	49,116 101,083	50,428 97,577	70,454 140,454	93,401 185,822	110,715 210,654	139,900 287,499	94,512 181,434	116,283 230,364	130,163 259,768	166,229 312,876
United States	2 8	30 120	372 769	772 1,414	665 999	167 344	404 792	24 103	—	—
Other Foreign Countries	41 166	139 360	440 1,254	1,011 1,483	179 334	753 1,384	648 1,203	1,657 3,301	1,444 3,532	1,093 2,386
Total	125,277 455,427	104,165 339,762	139,992 426,739	174,569 516,608	197,337 568,405	239,106 664,024	216,865 600,116	226,304 694,476	245,947 716,242	252,174 638,247
British East Indies	—	730 1,746	155 330	1,006 1,830	217 680	14 30	—	43 123	—	—
Other British Possessions	15 20	221 320	31 44	148 388	193 346	153 274	355 665	43 154	—	—
Total	15 20	951 2,066	186 374	1,154 2,247	410 1,026	167 304	355 665	86 277	217 319	273 444
TOTAL	125,292 455,447	105,116 341,828	140,178 427,113	175,723 518,855	197,747 569,431	239,273 664,328	217,220 600,781	226,390 694,753	246,164 716,561	252,447 638,691

V. Cured, Salted, or Canned Fish (except Sardines.)

Countries.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901. *	1902. †
A.—FOREIGN COUNTRIES.										
Sweden - - - - £	3,879 4,764	2,650 4,682	2,963 4,748	4,017 7,840	1,382 5,260	3,345 7,162	1,147 4,077	621 2,350	— —	— —
Norway - - - - £	329,378 327,651	293,335 317,891	296,243 325,839	311,508 331,088	356,398 392,419	275,365 305,245	273,020 332,981	244,391 313,555	252,366 294,856	221,550 294,856
Denmark - - - - £	141,150 103,194	121,360 87,351	112,505 86,615	120,019 82,517	107,367 76,278	124,649 96,908	99,654 87,822	128,208 106,263	†128,025 108,218	§128,007 107,270
Germany - - - - £	5,416 6,659	5,790 6,112	5,127 7,818	5,152 4,303	4,561 5,393	4,133 5,548	7,110 8,194	8,639 7,275	— —	— —
Holland - - - - £	10,406 9,646	13,004 9,794	10,583 6,315	10,219 7,393	10,316 7,307	7,641 5,494	9,331 8,595	12,650 11,461	— —	— —
Belgium - - - - £	2,135 2,379	3,108 3,463	1,235 1,489	2,653 3,692	5,894 12,177	1,761 2,064	2,697 3,062	5,051 5,494	3,661 6,908	— —
France - - - - £	3,412 6,712	2,902 6,277	3,559 8,103	3,240 9,360	2,424 8,636	2,742 10,082	4,002 13,505	3,480 9,730	1,297 5,185	1,473 5,383
Portugal - - - - £	1,562 2,773	368 594	204 594	623 1,095	1,253 1,863	1,733 2,842	703 1,478	134 255	— —	— —
Spain - - - - £	542 698	1,722 2,284	1,126 1,709	685 1,056	2,199 3,072	1,054 1,504	762 1,367	2,529 3,997	— —	— —
Italy - - - - £	6,632 18,362	9,097 22,394	8,003 23,828	8,794 32,238	12,102 39,910	9,087 26,880	10,523 29,993	9,485 29,533	7,248 21,721	9,796 29,022
Greece - - - - £	1 14	— —	— —	— —	3,480 2,081	— —	41 52	30 81	— —	— —
United { Atlantic	29,094 75,710	36,770 97,568	59,460 175,871	41,441 119,383	32,548 109,765	36,880 96,813	36,675 120,534	97,179 274,437	305,492 £738,808	480,973 £1,007,611
States { Pacific	154,647 374,505	87,308 204,705	227,650 483,330	226,110 513,597	238,612 495,486	235,066 418,789	213,965 437,254	186,482 355,969	— —	— —
Colombia - - - - £	— —	— —	601 1,311	— —	— —	— —	— —	— —	— —	— —
Other Countries - - - £	625 900	297 573	20 124	226 583	294 1,409	220 703	482 1,231	772 1,655	35,820 41,130	37,919 49,691
Total - - - - £	688,879 933,967	577,711 763,688	729,279 1,127,694	794,687 1,114,145	779,330 1,161,056	703,676 980,034	680,112 1,070,145	699,651 1,122,005	733,909 1,276,990	879,718 1,493,833

*) See next Sheet. † Including 71,692 cwts. from Iceland and Greenland. Value £59,333.
 ‡ Including 70,629 " " " " Value £58,208.

(continued)

APPENDIX B—continued.

V. (continued)—Cured, Salted, or Canned Fish (except Sardines).

Countries.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901. *	1902. +
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
B.—BRITISH POSSESSIONS—										
British South Africa - - - £	2,462 3,669	1,672 2,685	1,853 3,087	4,375 6,925	46 104	18 35	— —	378 575	— —	— —
Australasia - - - £	7,311 16,994	67 234	397 1,957	36 206	27 47	71 115	47 107	— —	— —	— —
Canada—Atlantic - - - £	115,902	249,970	211,499	236,424	286,638	62,062 215,685	71,588 248,613	97,269 327,448	228,961	423,864
Do. Pacific - - - £	348,434	631,731	566,053	649,296	734,060	340,843 654,249	157,200 393,346	236,459 598,585	687,572	1,072,023
Newfoundland - - - £	101,419 120,580	95,314 125,116	138,997 160,839	84,654 115,926	99,083 123,348	93,786 120,626	114,086 146,695	106,313 148,794	145,075 180,826	128,641 157,625
British West India Islands - - £	85 1,810	132 2,126	150 1,559	79 740	75 595	104 959	81 1,107	122 1,467	— —	— —
Other British Possessions - - £	308 416	378 1,435	413 958	558 1,266	465 1,524	163 1,422	283 1,441	402 1,643	412 2,124	3,721 9,154
Total - - - £	227,487 491,903	347,533 763,327	353,309 734,453	326,126 774,359	386,334 859,678	497,047 993,091	343,285 791,309	440,943 1,078,512	374,448 870,522	556,226 1,238,802
Total - - - £	916,366 1,425,870	925,244 1,527,015	1,082,538 1,862,147	1,060,813 1,888,504	1,165,664 2,020,734	1,200,723 1,973,125	1,003,397 1,861,454	1,140,594 2,200,577	1,108,357 2,147,512	1,435,944 2,732,635

* The figures for 1901 are shown in detail as "Canned Fish other than Sardines" and "Other Sorts not Canned" (see subsequent table).
+ The figures for 1902 are shown in detail as "Canned Salmon," "Canned Lobsters," "Canned Other Sorts," and "Not Canned All Sorts" (see subsequent table).

APPENDIX B—*continued.*

VI. QUANTITIES and Values of Fish of all kinds imported into certain Ports in England and Scotland in each of the years 1900, 1901 and 1902. (Extracted from the Annual Statement of the Trade of the United Kingdom for 1902.)

Ports.	1900.	1901	1902
ENGLAND :	Cwts.	Cwts.	Cwts.
Exeter - - - - -	30,575	50,059	44,160
£ 28,420	48,292	41,549	
Grimsby -	33,528	46,856	57,113
£ 43,956	62,740	66,274	
Harwich -	50,393	51,650	61,601
£ 75,759	75,993	86,66	
Hull -	637,275	756,090	695,828
£ 519,57	582,416	531,803	
Liverpool - - -	621,175	586,484	802,752
£ 1,234,523	1,216,998	1,637,871	
London (including Queenborough) -	542,799	514,529	654,908
£ 1,062,001	983,574	1,240,741	
Newcastle, North and South Shields -	20,365	32,499	31,361
£ 34,010	65,878	53,593	
Newhaven - - -	87,717	81,627	54,289
£ 412,900	371,815	244,028	
Plymouth -	10,028	8,904	11,256
£ 10,147	8,182	10,610	
Portsmouth - - -	1,200	—	—
£ 250	—	—	
Southampton -	48,333	30,551	32,415
£ 61,350	50,128	49,202	
SCOTLAND :			
Kirkwall - - -	1,391	3,796	7,033
£ 513	1,931	3,861	
Leith -	47,839	53,344	52,374
£ 39,082	51,101	50,662	
Lerwick -	23,549	27,073	28,632
£ 12,155	17,471	20,922	
Peterhead -	2,220	265	—
£ 564	276	—	
Stornoway -	3,514	628	231
£ 4,153	1,399	275	

NOTE—The above are the only ports in the United Kingdom for which the imports of Fish are shown separately

APPENDIX B—continued.

VII. SUMMARY TABLE showing the Total Value of all kinds of Fish imported into the United Kingdom from each Foreign Country and British Possession in each year from 1893 to 1902.

Countries.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
A.—FOREIGN COUNTRIES—										
Sweden - - -	73,247	81,506	79,331	57,546	27,663	48,713	26,365	4,394	8,493	2,401
Norway - - -	445,787	415,395	430,707	475,467	618,622	613,490	603,606	538,299	664,450	575,853
Denmark - - -	125,818	113,056	112,676	122,153	109,812	127,451	133,128	172,970	160,960	145,607
Germany - - -	26,587	41,876	31,828	22,213	27,644	31,907	25,473	23,343	13,244	7,605
Holland - - -	308,315	276,867	256,266	283,325	248,342	243,613	219,682	200,820	189,751	173,842
Belgium - - -	12,392	14,323	12,837	20,221	31,684	47,666	47,947	57,611	47,061	38,826
France - - -	514,604	331,344	368,060	459,783	481,440	459,447	588,181	514,277	464,420	323,780
Portugal - - -	103,856	98,171	141,048	186,917	212,517	280,341	182,912	230,619	259,768	312,876
Spain - - -	5,968	8,668	19,776	19,012	26,647	32,706	23,997	30,098	33,369	23,949
Italy - - -	18,400	22,962	23,920	34,086	40,088	27,080	30,375	29,683	21,721	29,022
Greece - - -	14	—	—	—	2,081	—	52	81	—	—
Austrian Territories - -	—	—	1,460	—	—	—	—	—	—	—
United States - - -	540,539	411,359	750,270	739,641	716,583	613,843	666,328	728,834	839,965	1,101,147
Colombia - - -	—	—	1,311	—	—	—	—	—	—	—
Other Foreign Countries -	3,466	4,001	2,491	3,486	3,650	7,638	8,545	11,751	48,377	57,584
TOTAL - - -	2,178,993	1,869,528	2,231,981	2,423,855	2,546,773	2,543,895	2,560,691	2,542,780	2,751,579	2,792,492

APPENDIX B—continued.

VII. SUMMARY TABLE—continued.

Countries (cont.).	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
	£	£	£	£	£	£	£	£	£	£
I. BRITISH POSSESSIONS—										
British South Africa - -	3,669	2,085	3,087	6,925	104	35	—	575	—	—
Australasia - - - -	16,994	234	3,879	206	47	115	107	—	—	—
Canada - - - -	348,434	632,605	566,053	650,183	734,813	880,101	645,877	930,023	690,368	1,074,313
Newfoundland - - -	120,580	125,116	160,839	115,926	123,348	120,626	146,695	148,794	180,826	157,625
British West India Islands -	11,130	11,826	10,256	10,907	10,047	11,853	10,216	11,651	9,732	11,294
British East Indies - -	—	1,746	330	1,359	680	30	—	123	—	—
Channel Islands - - -	—	—	—	764	1,542	2,347	876	100	335	115
Other British Possessions -	2,951	3,340	2,046	2,458	3,960	3,599	3,580	2,877	4,444	72,947
TOTAL - - - -	503,758	777,552	746,490	789,228	874,541	1,018,706	807,351	1,094,143	885,705	1,316,294
TOTAL - - - -	2,682,751	2,647,080	2,978,471	3,213,083	3,421,314	3,562,601	3,368,042	3,636,923	3,637,284	4,108,786

APPENDIX C.

PAPERS handed by Sir THOMAS ELLIOTT, K.C.B.

PROTECTION OF UNDERSIZED FLAT FISH.

I.—SUMMARY OF REPLIES from NORTH SEA POWERS and the UNITED STATES of AMERICA regarding Restrictive Legislation, and the Minimum Sizes of Flat Fish.

February, 1904.

Country.	Date of, and Reference to Law.	Minimum Sizes.			
		Brill.	Turbot.	Soles.	Plaice.
FRANCE	10 May 1862 Article XI.	10 c.m.	10 cm. = total length	10 cm. length of 5½	10 cm. inches.
<i>Consular Reports :</i>					
Dunkirk	—	do.	do.	do.	do.
Boulogne	—	do.	do.	do.	do.
Havre	—	do.	do.	do.	do.
Cherbourg	—	do.	do.	do.	do.
Brest	—	16 cm. = 6¼ in.	20 cm. = 7¾ in.	16 cm.	20 cm.
La Rochelle	—	10 cm.	10 cm.	10 cm.	10 cm.
Bordeaux	—	do.	do.	do.	do.
Arcachon	—	Steam fishermen reject all under 15 cm. = 5½ inches.			
				Soles of 125 gmme. retained.	Plaice of 125 gmme. retained.

APPENDIX C—continued.

Country.	Date of, and Reference to Law.	Minimum Sizes.			
		Brill.	Turbot.	Soles.	Plaice.
			Total length.		
BELGIUM	5 Sept. 1892 Article 3.	25 cm. = 9 $\frac{1}{2}$ in.	25 cm. = 9 $\frac{1}{2}$ in.	18 cm. = 7 in.	18 cm. = 7 in.
HOLLAND	21 June, 1881 - Article 7, 9, 16, 23, regulates size of herrings, flounders, smelts, &c. 15 May 1884, shell-fish. 11 August 1892. 17 August 1900.	No limit in North Sea and Zuiderzee. but			16 cm. for plaice in Scheldt and Zee- land. = 6 $\frac{1}{2}$ in.
DENMARK	Section 56 Law, 5 April 1888.	8 inches 9 $\frac{3}{4}$ in. total length.	8 inches Snout to root of tail. 12 $\frac{1}{2}$ in. total length.	— —	8 inches. 9 $\frac{3}{4}$ in. total length.
	New Bill now before the Rigsdag.	Kitt (?), 9 $\frac{1}{4}$ in., = 11 $\frac{1}{2}$ in. total length.	10 $\frac{1}{2}$ in. = 12 $\frac{1}{2}$ in. total length.	7 $\frac{3}{4}$ in. = 9 in. total length.	7 $\frac{3}{4}$ in. = 9 $\frac{1}{2}$ in. total length.
Bornholm	Article 15. Law, 5 April 1888.	—	Turbot under $\frac{1}{2}$ lb. not to be sold.	—	—
GERMANY	Governed by Prussian Acts of 30 May 1874. 30 March 1880 Each State settles minimum size limit.	—	—	—	15 cm.
Hamburg	15 June 1887	—	—	—	18 cm.
Bremen	27 May 1888	—	—	—	18 cm.
Hanover	8 Aug. 1887	—	—	—	18 cm.
Schleswig-Holstein . .	8 Aug. 1887	—	—	—	18 cm.
Mecklenburg	By a Law of December 1903, not yet promul- gated.	—	—	—	20 cm. head to tail.
SWEDEN	No restrictive legislation affecting flat-fish. It is thought that in consequence of the spread of trawling, an under- sized fish law would be expedient, but the idea has not taken definite shape				
NORWAY	No restrictive legislation affecting flat-fish.				
UNITED STATES					

APPENDIX C—*continued*.

II.—ABSTRACT of RESTRICTIVE LEGISLATION in NORTH SEA STATES and the UNITED STATES OF AMERICA, with SUMMARY of Replies to Questions regarding Enforcement, Limits of Application and General Effect of Laws, and Existence of Markets for Sale of Undersized Fish.

BELGIUM.

Law of 19th August, 1891.

Article 1.—Gave Belgian fishermen the exclusive right of fishing within three miles from low water mark along the Belgian coast, as well as of dependent islands and banks.

Belgium.

(This was the first exercise by Belgium of the exclusive fishery limits fixed by Article 2 of the North Sea Fisheries Convention, 1882.)

Article 8.—Empowered the King to determine the restrictions and measures necessary to prevent the destruction and the capture of fry and small fish by Belgian fishermen.

(Effect was given to this Article by the Law of 1892.)

Law of 5th September, 1892.

The Belgian Minister for Agriculture, &c., in his report to the King, pointed out that the object of Article 8 of the Law of 1891 was most important, and that in order to prevent the destruction of the sea fishing industry, it was necessary to check the waste of fish life and to protect the reproduction and multiplication of the more valuable species. Referring to the Conferences in London in 1890 and 1892, and to the views expressed that the object could only be attained by international action, he explained that these considerations had prompted the present law, and hoped that the example would be followed by other Powers. It was essential to prevent the capture of young fish, which had already a certain market value. *It was accordingly proposed to put an obstacle in the way of the introduction into Belgium of fish under a specified size without distinction as to the place of capture (sans distinction de leur provenance) or of the nationality of the boat which carried them.* Otherwise it would be easy to evade the law.

The purchase of under-sized fish was not made an offence, because the consumer could not be required to have a perfect knowledge of the different species of sea fish.

BELGIUM.

Law of 5th September, 1892.

Article 3.—The length below which the fish hereunder designated are to be thrown into the sea is determined as follows:—

1. Turbot, brill, ray, halibut, cod and haddock, 25 cm.
2. Sole, dab, plaice and whiting, 18 cm.

These measures represent the total length of the fish.

Fish of the species specified above found on board Belgian fishing boats navigating or anchoring in Belgian waters, will be considered as having been taken (comme provenant) in territorial waters.

Article 4.—Fish mentioned in Article 3. not attaining the specified dimensions and wherever caught (*et quelle que soit leur provenance*), must not be landed, transported, hawked, exposed for sale or sold in Belgium.

Article 7.—Undersized fish may be seized and thrown into the sea or sent without delay to the nearest hospital.

Article 8.—Infractions of Articles 3 and 4 are punishable by a fine of from 26 to 100 francs. The fine is doubled if the offence takes place at night, or for an offence within two years of a former conviction, or if the master refuses to submit boat and fish to inspection.

DENMARK.

Fishery Law, 5th April, 1888.

Denmark.

The sections affecting under-sized fish are :—

*Chapter 2.—Fishery at Sea and off open coasts.**Section 13.*—Minimum size for lobsters is 7 inches from beak to root of tail.*Section 15 (c).*—No trade may be carried on in—

Bornholm Salmon	under 3 lb.
„ Trout	„ $\frac{1}{2}$ lb.
„ Cod	„ $\frac{1}{4}$ lb.
„ Turbot	„ $\frac{1}{2}$ lb.

“For other kinds of fish see Section 56.”

Chapter 4.—Fishing in fiords other than Lim Fiord.

Sections 41-2.—In waters in which fry may be expected to hatch, bye-laws made by a local Committee may be framed to prohibit fishing with trawls or nets, except nets used for the capture of small fish for bait. These “closed waters” not to exceed one-quarter of the whole area concerned.

By Section 43.—“Under very peculiar conditions a smaller measure of size for fish can be named in the bye-laws than is laid down in Section 56, but care must be taken not to interfere with the privileges of the local fishermen.”

Chapter 5, Section 56.—Fish fry and immature fish which are caught can only be used as food for man. The purchase and sale of the same, except when the take is caught for bait, or for breeding, or to be exchanged from one hatching station to another, is forbidden.

This prohibition includes eels, pike and salmon—less, than 12 inches.

Cod	less than 8 inches,
Whiting	
Plaice	
Turbot	
Brill	
Bream	
Tench	
Trout	
Gwiniad	less than 6 inches,
Dab	
Flounder	
Perch	
Bleak	

measured from the point of the fore-snout to the root of the caudal fin.

Section 58.—Infractions of the sections specified above are punishable by fines of from 10 to 400 crowns.

A Bill now before the Rigsdag (1904) proposes to allow plaice of $6\frac{1}{2}$ inches (snout to tail) to be taken ashore in certain districts, provided they are consumed on the spot or exported at once.

It also proposes to fix the following minimum sizes :—

	Snout to tail. Inches.	Total length. Inches.
Kitt (?)	$9\frac{1}{4}$	$11\frac{1}{2}$
Turbot (an increased size)	$10\frac{1}{4}$	$12\frac{1}{2}$
Soles (a new provision)	$7\frac{3}{4}$	9
Plaice (reduced size)	$7\frac{3}{4}$	$9\frac{1}{4}$

FRANCE.

France.

“Previously to the year 1862 there were special regulations as to the size at which different species of fish could be caught or sold, from 9 cm. (about $3\frac{1}{2}$ inches) for smelt to 27 cm. ($10\frac{1}{2}$ inches) for salmon and cod.”

Decree, 10th May, 1862.

The Decree of 10th May, 1862, which is applicable to and now in force in all France, alters the previous legislation.

Article 11 of this Decree runs as follows :—

“ It is forbidden to fish, salt, buy, sell, transport, or employ for any purpose whatever—

(1) Fish under 10 cm. (4 inches) in length, measured from the eye to the root of the tail, unless they are reputed migratory fish (*poissons de passage*), or that they belong to a species which, when full grown, does not reach this length.

(2) Lobsters and crayfish under 20 cm. (8 inches) from the eye to the root of the tail.

(3) Oysters less than 5 cm. (2 inches).

Penalties.—Fines from 25 to 125 francs or imprisonment for three to 20 days. The penalty is doubled when fry or undersized fish are transported by vehicles, boats, or beasts of burden. Penalty increased on subsequent convictions.

GERMANY.

The regulations in force in the maritime states of Germany, relative to the protection of undersized fish, are governed by the Prussian Fishery Acts of May 30th, 1874, and March 30th, 1880.

These contain the following general provisions :—

Section 1.—The following law is applicable to all coast and inland fisheries in Prussian waters.

Section 22.—After consultation with the provincial representatives concerned, the following may be laid down in a royal decree :—

(1) What fishes may not be caught on account of their size and weight.

Section 24.—Undersized fish must, if caught alive, immediately be restored to the water.

Section 26.—Undersized fish must not be offered for sale, sold or otherwise conveyed to other persons within the district affected by the prohibition.

Section 27.—Exemptions are granted when undersized fish are taken for scientific or pisciculture purposes.

Section 29.—Spawning or small fish grounds and waters commanding the entrance of fish from the sea to inland waters may be closed to fishing by decree of the Minister for Agriculture.

Section 51.—Offences incur a fine not exceeding 90 marks, or imprisonment not exceeding four weeks.

In addition, the Court may order the confiscation of any fish illegally offered for sale, sold, or otherwise disposed of, without regard for the fact whether they are the property of the offender or not.

The regulations are practically uniform in the Maritime German States, so far as the species and sizes of fish, and penalties are concerned. Under Article 3 of the law of 30th March, 1880, the President of the Government of the District may allow exceptions from the regulations so far as considerations relative to the maintenance of the stock of fish permits.

Decree of August 8th, 1887, East Prussia

Is typical of the legislation in force in Germany :—

East Prussia.

Section 1.—Fishing for spawn and fry is prohibited.

Fish of the following species may not be caught unless they measure the following minimum lengths from the top of the head to the end of the caudal fin :—

		Centi- metres.
(18 cm. in Hamburg, Bremen, Hanover and Schleswig-Holstein.)	Plaice	15
	Flounder	15
	Sturgeon	100
	Salmon	50
	Salmo Maræna	40
(Reduced to 25 cm. in several States, 30 cm. in Lubeck.)	Eel	35
	Perch-pike	28
	Bream	
	Salmon Trout	
	Carp	
	Shad	
	Rudd (?)	
	Barbel	

Section 2—continued.

		Centi- metres.
	Pike	20
	Lavaret	
	Nose Fish	
	Chub	
	Tench	
	Trout	18
	Grayling	
	Half-bream	15
	Bream (Abramis vimba)	
	Perch	13
	Roach	
	Red-eye	
	Crucian	12
	Coregonus Albula	
9 cm. fixed for lobsters in Melaorf	Craw Fish	10

The Minister of Agriculture is empowered, for the whole or separate parts of the fishing grounds, to raise the minimum measurements for—

Sturgeon	to 120 cm.
Salmon Trout	to 50 cm.
Perch-Pike	to 35 cm.
Crabs	to 12 cm.

and for any species of flat fish named in the list, but the increased limit is not specified. He may also prescribe minimum measurements for varieties of flat fish not distinguished in the list, and for cod. In Konigsberg the limit for salmon and sea trout has been raised to 50 cm. Undersized fish must be returned to the water with the care necessary for their safety, and must not be used as bait. *They must not be sold, exposed for sale or sent away whether caught in enclosed or non-enclosed waters.* Spawn, fry, and undersized fish caught in non-enclosed waters must not be used for manure or any commercial or industrial purpose, but the President of the Government of the district may, in the event of urgent commercial reasons, allow exceptions temporarily and for particular areas.

HAMBURG.

Law 15th June, 1887, Sect. 18.

Hamburg. In Hamburg the inspecting authorities are empowered to dispense with the regulations, relative to the sale of undersized fish in single cases of urgent necessity.

HOLLAND.

Law of 21st June, 1881.

Holland *Article 7.*—The landing, sale, purchase, transport, having in stock, or consuming of—
Herrings under 10 cm.
Flounders „ 8 cm.
Smelts „ 7 cm.
are prohibited.

Article 16.—Offences punished by fine not exceeding 75 florins, or by imprisonment not exceeding seven days. But an offence is not committed unless more than one-twentieth of the take of fish is of smaller size than the minima fixed in Article 7.
Article 23.—When an offence is committed the undersized fish shall be thrown into the sea or rendered unserviceable.

Scheldt and Zealand Channels. Decree 11th August, 1892.

This law applies fresh Regulations to the Scheldt and Zealand Channels. It is prohibited in Article 14 to have fish on board below the following measurements or weights :—

Flounders-	-	18 cm.
Plaice	- - -	16 cm.
Mackerel	- -	$\frac{1}{2}$ kilo.
Oysters	- -	8 cm. on smaller side.
Mussels	-	4 cm.

Length is from snout to tip of tail fin.
Fish caught below these sizes and weights must immediately be thrown into the sea.

By a further Decree of 17th August, 1900, applicable to Scheldt and Zealand Waters, it is forbidden (Article 23) to have in a vessel cauf or ben any fish under the following sizes or weights :—

Plaice	-	}	16 cm.
Flounders	-		
Smelts	-		
Oysters	-		6 cm. on narrowest part.
Mussels	-		4 cm.
Lobsters			20 cm.
Mullet	-		$\frac{1}{2}$ kilo.

Size is measured from point of head to end of tail fin.

SWEDEN.

Royal Fishery Law, 29th June, 1852.

Prescribes that "fishing shall be so carried on that the spawn shall not be destroyed, Sweden, and that the fish after spawning and the tender young shall not be taken."

Section 23 prohibits the taking of—

Lobsters less than 21 cm.

Oysters „ „ 59 mm.

Eels less than 37 cm. must not be landed or sold in Malmöhus.

The fisheries are regulated locally by regulations sanctioned by the various District Governors.

NORWAY.

The only existing prohibition is with regard to lobsters, for which the minimum limit is Norway 21 cm. (Law, 29th June, 1894.)

Ordinances, however, are in force in the northernmost districts forbidding the use of young fish for manure or their sale to guano manufactories.

UNITED STATES OF AMERICA.

There is no Federal statute bearing on the subject of undersized fish. Individual United States. States, however, have in many cases enacted laws intended to prevent the capture of small fish, such laws pertain more especially to freshwater fish. In Rhode Island the minimum size for lobsters has been fixed at 9 inches.

The flat-fishes in the United States are, with the exception of the halibut, comparatively unimportant. In the absence of the beam trawl fishery, the flat-fish resources are undeveloped, and there has been no occasion to conduct investigations with a view to their protection. In the great pound-net and trap-net fisheries on the coasts and in the great lakes there is a large and unavoidable destruction of small fish, notwithstanding that a minimum size of mesh may be enforced.

SUMMARY of REPLIES to QUESTIONS addressed through the FOREIGN OFFICE to H.M.
REPRESENTATIVES in 1900 and 1904.

Country.	Extent to which law is enforced.	Is prohibition applied to fish, from whatever source obtained?	General effect of law.	Market for under-sized fish.
Belgium -	Enforced without difficulty, and without complaints from fishermen. (1900.)	Yes	The measures will not be wholly effectual until other North Sea States enact analogous legislation. (1900.)	
	Rigorously enforced. A number of prosecutions have been instituted in the last 12 years at Furnes and Bruges. (1904.)	Yes. (1904.)	The Belgian Government again (Feb. 1st, 1904) draw attention to desirableness of similar measures in other North Sea States.	
Denmark -	Enforced to a considerable extent by local inspectors and police, but it is difficult to prove that the fish were intended for sale. Proposals to amend the law, by prohibiting the landing of undersized fish, have been brought before the Rigsdag, but have not been adopted. (1900.)	Yes	Difficult to appreciate effect with certainty, owing to illegal sales and legal consumption by the fishermen themselves; but the provision that undersized fish can only be used for human food has checked the practice of giving such fish to animals. (1900.)	Quantities are exported. (1900.)
		No fresh information	given in 1904.	
France -	In practice the supervision of the Marine Administration and Market Authorities is not effective. In Mediterranean undersized fish are commonly caught and sold, and prosecutions are rare. The various Congresses held lately in France with regard to sea fisheries have called attention to the non-observance of the law and consequent injury to fisheries. Congress at Dieppe, 1898, suggested an International Agreement as to size of fish. (Mr. Austin Lee. 1900.)	No distinction is made as to source from which fish is obtained. In practice it would be difficult to make any distinction. (1900.)	No satisfactory reply can be given. The limit of 10 cm. is considered to be far too low. (1900.)	
o reply	received in 1904 but	the following reports	from H.M. Consuls	were obtained.
Dunkirk -	Strictly enforced.	—	—	Small fish, particularly plaice and soles just over 10 cm., find ready sale.
Boulogne -	Do.	—	—	No sale.
Havre -	Not strictly.	—	—	Cannot estimate sale.
Cherbourg	Rigorously applied, leniency shewn to first offenders.	—	—	—
Brest -	Not strictly, owing to distress among fishermen.	—	—	No demand. Not more than a ton sold in a year.

SUMMARY of REPLIES to QUESTIONS—*continued.*

Country.	Extent to which law is enforced.	Is prohibition applied to fish from whatever source obtained?	General effect of law.	Market for undersized fish.
La Rochelle -	Strictly -	—	—	Cannot estimate quantity sold.
Bordeaux	Not strictly- -	—	—	—
Arcachon -	—	—	—	Steam fishermen reject all fish under 15 cm. but retain soles and plaice of 125 gmme. and other fish of 800 gmme.
Germany	Strictly enforced. (1900.) do. (1904.) - -	Sale of any fish under certain size or weight is absolutely prohibited. (1900.) [No fresh information these two	Opinions are very divided. (1900.) given in 1904 under heads.]	"It may be said that consumption of undersized fish does not take place." (1904) The German Sea Fisheries Union determined in 1903 to ascertain exactly the sizes of market fish. Data not yet sufficient for definite information.
Netherlands - North Sea and Zuider Zee -	Enforcement difficult if not impossible, a strict observance cannot even be attempted. (1900.) - No reply. (1904.) -	Act 7 of the Law of 1881 applies to fish wherever taken but the cases to which it was applied concern fish caught in the Zuider Zee only. (1900.)	No perceptible influence in counteracting destruction of young fish. (1900.)	"Data missing by which return could even approximately be given." (1904.)
Scheldt and Zealand	Difficult to enforce. (1900.)	Concerns the Scheldt and Zealand Fishery only. (1900.) -	It has had some good influence, but not enough effectually to restrain the evil. (1900.)	do. (1904.)
Sweden -	No prohibitions in force except with regard to eels, lobsters and oysters. Law often disregarded. (1900.)	Yes. (1900.) No fresh particulars given in 1904.	The regulations have essentially aided to counteract the destruction of lobsters and oysters. Prohibition with regard to eels received with universal satisfaction. (1900.)	No records exist of the percentage of small fish sold. (1904.)
Norway -	Control exercised by police and Customs. (1900.)	Yes. (1900.) - No fresh particulars given in 1904.	Difficult to judge, as Norwegian system is to regulate instruments and mesh, rather than to prohibit the taking or sale of fish under certain sizes. (1900.)	
United States	No	restrictive legislation	affecting flat fish (1904).	

APPENDIX D.

PAPERS handed in by Mr. ARCHER.

I.—STATEMENT showing, for the twelve months October 1902 to September 1903, the Total Quantity of Fish landed from the North Sea by the vessels whose catches were recorded; the Quantity of Small Plaice; and the percentage borne by the Small Plaice to the Total Quantity.

Port.	Total Quantity of Fish.	Small Plaice.	Percentage borne by the Small Plaice to the Total Quantity of Fish.
	Cwts.	Cwts.	
North Shields	204,324	61	0·03
Sunderland	10,710	15	0·14
Hartlepool	61,807	722	1·17
Scarborough	59,925	273	0·46
Hull	1,013,423	8,103	0·80
Grimsby	711,726	67,621	9·50
Boston	150,072	12,769	8·51
Yarmouth	13,748	4,297	31·26
Lowestoft	159,259	42,386	26·61
Ramsgate	30,803	—	—
London	904,296	126,743	14·01
TOTAL	3,320,096	262,990	7·9

II.—STATEMENT showing the Average Weight of Small Plaice of various sizes from 7 to 15 inches in length.

	Ounces.
Under 7 inches	1·445
7 inches and under 8 inches	2·311
8 " " 9 "	3·377
9 " " 10 "	4·651
10 " " 11 "	6·438
11 " " 12 "	8·541
12 " " 13 "	11·235
13 " " 14 "	14·388
14 " " 15 "	17·553

APPENDIX D—*continued.*

III—STATEMENT showing, for the period from March 1902 to December 1903, the Total Quantity of Fish landed in London from the North Sea by the vessels whose catches were recorded; the Quantity of Small Plaice; and the percentage borne by the Small Plaice to the Total Quantity.

Month.		Total Quantity of Fish.	Small Plaice.	Percentage borne by the Small Plaice to the Total Quantity of Fish.
1902.		Cwts.	Cwts.	
March	- .	48,988	154	0·3
April	- - - -	66,033	39,325	59·5
May	- - -	75,956	36,265	47·7
June	- - -	72,650	29,006	39·9
July	- -	69,337	25,231	36·3
August	-	76,237	16,256	21·3
September	-	72,022	8,927	12·4
October	-	71,432	4,982	6·9
November	-	56,947	518	0·9
December	-	53,160	—	—
1903.				
January	-	69,891	—	—
February	-	42,761	—	—
March	-	69,828	8,491	12·2
April	-	71,003	27,335	38·5
May	-	89,951	28,117	31·3
June	-	83,900	26,062	31·0
July	-	89,058	17,735	19·9
August	-	98,671	8,770	8·9
September	-	107,694	4,733	4·4
October	-	89,767	2,514	2·8
November	-	77,909	—	—
December	-	82,684	—	—

APPENDIX D—continued.

IV — STATEMENT showing Analysis of the Quantity and Value of undersized Plaice taken on the Eastern Grounds by certain fleets, from which returns have been received.

(Referred to in Answer to Question 2546.)

1902.

Total Catch of Plaice.	Total "Small Plaice."	Total of Plaice below 11 ins. in length.		Average value of "Small Plaice" per cwt.	Average value of "Medium Plaice" per cwt.
Cwts. 120,180	Cwts. 99,331 (82 %)	Quantity.	Value at price of "Small Plaice."		
		Cwts. 75,492 (63 %)	£. 37,746 (54 %)		
		Value of total catch if those of 11 ins. and over are priced as "Medium."			
		£. 28,074 (40 %)	s. d. 10		
£. 69,988	£. 50,241 (72 %)				

1903.

		Total of Plaice below 11 inches.			
		Quantity.	Value at price of "Small Plaice."		
Cwts. 119,725	Cwts. 82,803 (69 %)	Cwts. 63,096 (53 %)	£. 24,606 (40 %)		
		Value of total catch if those of 11 ins. and over are priced as "Medium."			
£. 62,296	£. 35,028 (56 %)	£. 18,459 (29 %)		s. d. 8 5	s. d. 18 7

APPENDIX D—*continued.*

V.—STATEMENT relating to FISHING beyond NORTH SEA, as prepared from FORM D for 1903.

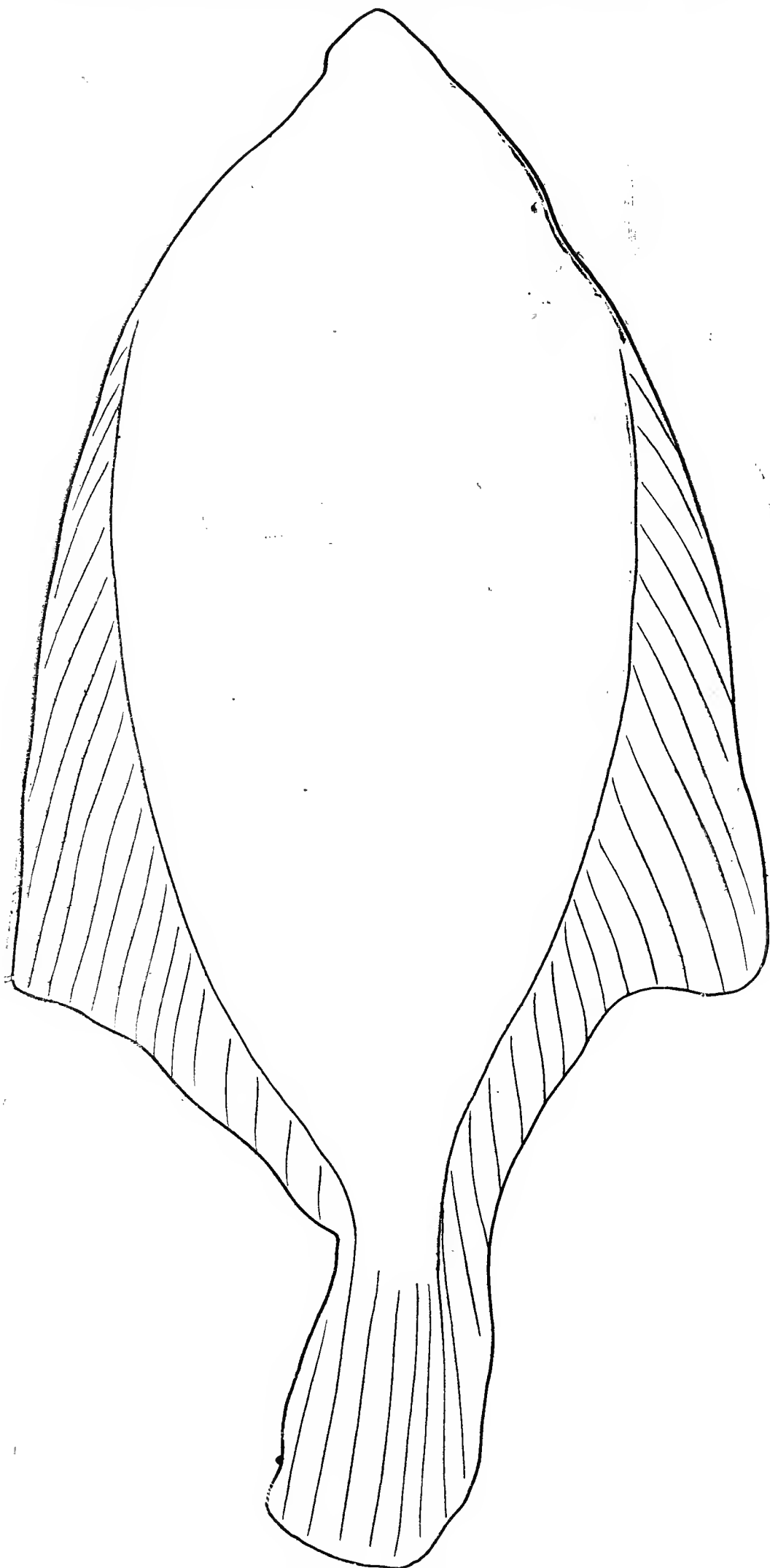
	Trawlers.	Liners.	Total.
Number of Vessels landing fish recorded on Form D.	1,662	563	2,225
Number of days absent from Port	31,300	10,607	41,907
Total Number of Vessels landing fish	1,820	727	2,547
Total Number of days absent	34,130	13,533	47,663
Quantity of Fish caught by Vessels recorded on Form D :			
Brill	6	—	6
Soles	22	—	22
Turbot -	385	70	455
Catfish -	13,596	224	13,820
Cod, Large	326,034	25,416	351,450
„ Medium	81,666	80	81,746
„ Small	20,518	30	20,548
Conger Eels	739	24	763
Dabs	9,049	—	9,049
Gurnards	4,431	—	4,431
Haddock, Large	177,032	202	177,234
„ Medium	167,437	45	167,482
„ Small	10,626	—	10,626
Hake	22,984	—	22,984
Halibut	20,673	60,792	81,465
Lemon Soles	6,992	55	7,047
Ling	23,592	17,023	40,615
Megrim	8,139	—	8,139
Monks -	1,488	—	1,488
Plaice, Large	75,396	25	75,421
„ Medium	28,557	—	28,557
„ Small	957	40	997
Skates and Rays	18,587	14,312	32,899
Torsk	229	6,448	6,677
Whiting	14,020	—	14,020
Witches	19,195	17	19,212
All other except Shell Fish	40,132	3,301	43,433
Total	1,092,482	128,104	1,220,586

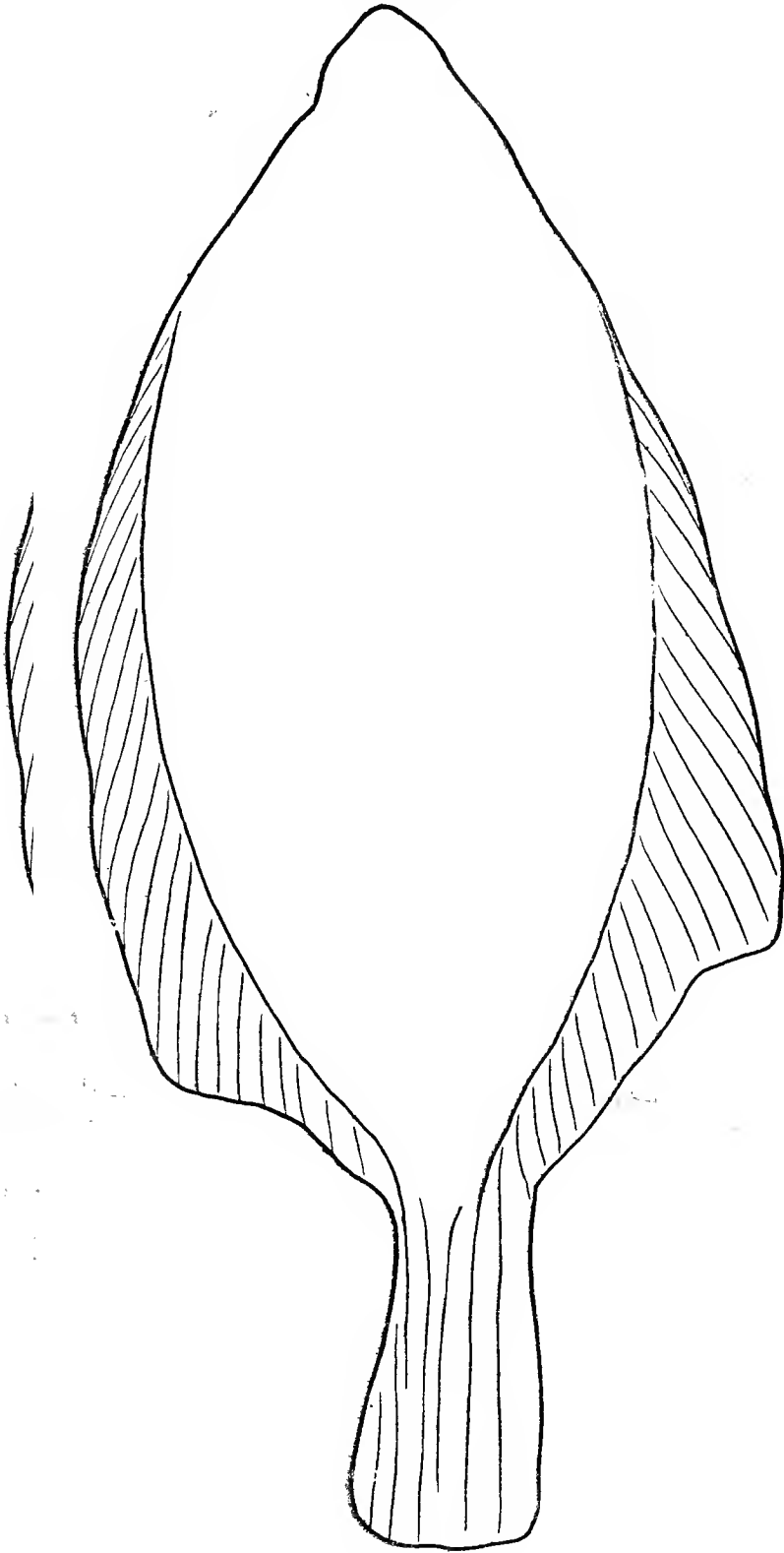
Note.—The above figures are subject to revision.

Since this table shows that 91 per cent. of the catching power, whether estimated by the number of vessels or the number of days absent from port, landed at Ports on the East Coast 104,975 cwts. of plaice, it would seem fair to assume that of 887,599 cwts. landed in England and Wales during 1903, between 110,000 and 115,000 cwts. came from waters beyond the North Sea, *i.e.*, Iceland, Faroe, &c.

APPENDIX D—*continued*.

VI. DIAGRAMS showing actual size of PLACES. A. Length, 11 inches; Weight, 7 oz.



APPENDIX D—*continued.*B. Length, $8\frac{1}{4}$ inches; Weight, 3 ozs.

APPENDIX E.

PAPER handed in by Mr. CUNNINGHAM.

Box of PLAICE from Brown Ridges (Lowestoft), 2nd October, 1895.

Length in Inches.	No. of Males.	No. of Females.		TOTALS.
		Mature.	Immature.	
9	1	1	2	4
10	6	—	12	18
11	25	6	24	55
12	27	12	24	63
13	10	14	5	29
14	2	1	—	3
15	—	—	—	—
16	—	3	—	3
17	—	—	—	—
18	—	—	—	—
19	—	1	—	1
	71	38	67	176
	40·3 per cent.	21·6 per cent.	38·1 per cent.	

Size at which sexual maturity is attained by Females, 9–13 inches.

Box of PLAICE caught between Lowestoft and Dutch Coast, 18th November, 1895.

Length in Inches.	No. of Males.		No. of Females.		TOTALS.
	Mature.	Immature.	Mature.	Immature.	
8	—	1	—	—	1
9	6	9	—	4	19
10	17	14	2	21	54
11	21	7	12	27	67
12	17	4	11	9	41
13	4	—	5	1	10
14	1	—	1	—	2
15	1	—	—	—	1
16	—	—	1	—	1
7	—	—	—	—	—
18	—	—	1	—	1
	67	35	33	62	197
	34 per cent.	17·8 per cent.	16·7 per cent.	31·5 per cent.	

Size at sexual maturity : Males 9–12 inches, Females 10–13 inches.

APPENDIX E—*continued.*

PLAICE examined at Plymouth, 1st January to 11th March 1893.

Length in Inches.	No. of Males.		No. of Females.		TOTALS.
	Mature.	Immature.	Mature.	Immature.	
7	—	—	—	1	1
8	—	2	—	—	2
9	2	—	1	—	3
10	4	2	—	2	8
11	3	1	1	—	5
12	4	1	1	2	8
13	5	—	4	3	12
14	4	—	3	3	10
15	1	—	2	—	3
16	1	—	8	—	9
17	—	—	1	—	1
18	—	—	2	—	2
19	1	—	—	—	1
20	—	—	1	—	1
21	—	—	2	—	2
22	—	—	—	—	—
23	—	—	—	—	—
24	—	—	1	—	1
25	—	—	1	—	1
25		6	28	11	70

Box of PLAICE from N.E. of Dogger Bank, 6th December, 1895.

Length in Inches.	No. of Males.		No. of Females.		TOTALS.
	Mature.	Immature.	Mature.	Immature.	
10	—	4	—	2	6
11	—	4	—	8	12
12	1	3	—	2	6
13	—	7	—	3	10
14	2	1	—	6	9
15	3	1	—	4	8
16	9	—	1	1	11
17	1	—	1	1	3
18	—	—	—	—	—
19	—	—	—	—	—
20	—	—	—	—	—
21	—	—	2	—	2
22	—	—	—	—	—
23	—	—	1	—	1
16		20	5	27	68
23·5 per cent.		29·4 per cent.	7·4 per cent.	39·7 per cent.	

Size at sexual maturity : Males 12-15 inches, Females 16-17 inches.

APPENDIX E—continued.

EASTERN GROUNDS IN DECEMBER.

Box of PLAICE caught 54° 35' N. Lat., 7° 40' E. Long., depth 11 fms.

Examined 20th December, 1895.

Length in Inches.	No. of Males.		No. of Females.		TOTALS.
	Mature.	Immature.	Mature.	Immature.	
9	—	1	—	—	1
10	—	4	—	1	5
11	—	5	—	6	11
12	—	7	—	17	24
13	2	8	—	35	45
14	3	3	—	13	19
15	—	1	1	7	9
16	—	—	—	4	4
17	—	—	1	—	1
18	1	—	—	—	1
19	—	—	1	—	1
	6	29	3	83	121
	4·9 per cent.	24 per cent.	2·5 per cent.	68·6 per cent.	

Box sent from Geestemünde and examined in London.

APPENDIX F.

PAPERS handed in by Mr. GARSTANG.

No. 1. Total Number of STEAM TRAWLERS observed from the HORN REEF LIGHTSHIP.*

Month.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Monthly Average for 7 Years.
January	13	38	22	27	78	55	56	41
February	11	22	7	8	100	42	30	1
March - -	45	80	40	51	102	73	53	
April - -	248	171	194	261	304	394	149	246
May -	188	222	185	379	236	214	475	271
June	274	174	219	319	533	501	339	337
July -	187	119	116	140	236	266	264	190
August -	26	39	121	262	92	113	326	140
September	15	17	147	168	149	136	121	108
October - -	139	145	181	320	130	93	187	171
November -	115	151	303	230	190	152	64	172
December - -	164	145	144	181	24	45	127	119

No. 2. STEAM TRAWLERS recognised as ENGLISH from the HORN REEF LIGHTSHIP.*

Month.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Monthly Average for 7 years.
January -	3	7	4	-	-	-	-	2
February - -	3	1	2	-	-	-	-	1
March	10	10	5	3	6	4	5	6
April -	66	41	53	19	16	23	18	34
May - -	38	68	45	52	31	38	38	44
June	30	57	38	51	45	77	57	51
July - -	17	36	12	30	15	32	26	24
August - - -	3	2	11	22	7	7	5	8
September -	2	3	2	4	5	8	3	4
October -	3	-	21	7	6	1	3	6
November - - -	3	7	39	5	-	2	1	8
December - -	3	3	6	3	-	-		2

* Compiled from the Danish Official Reports.

APPENDIX F.—*continued.*

No. 3. STEAM TRAWLERS recognised as GERMAN from the HORN REEF LIGHTSHIP.

Month.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	Monthly Average for 7 years.
January	1	1	10	8	17	10	7	8
February	1	7	4	1	25	10	7	8
March	3	8	7	8	36	36	17	16
April	109	108	114	62	69	58	32	79
May	28	49	64	101	72	63	72	64
June	36	105	251	69	114	72	60	101
July	40	80	52	44	78	58	85	62
August	8	23	110	78	44	60	72	56
September	8	13	101	34	45	26	53	40
October	16	28	49	58	40	38	27	37
November	18	138	238	51	38	21	21	
December	20	33	26	36	5	12	16	21

No. 4. TABLE showing the number of British and German Trawling Vessels seized or warned by the Danish authorities on the Horn Reef grounds; (1) for fishing within territorial limits, and (2) for causing injuries to Danish fishing vessels or gear.

(Compiled from the official Danish reports).

	(1) Fishing in Territorial Limits.			(2) Concerned in Collisions, &c.		
	Steam Trawlers.		German Sailing Trawlers.	Steam Trawlers.		German Sailing Trawlers.
	British.	German.		British.	German.	
1894	5	3	—	?	!	?
1895	12	2	12	5 (7)	—	—
1896	11	5	2	9 (11)	5	2
1897	8	2	2	6	4	7
1898	12	6	1	4 (5)	1	—
1899	16	—	5	8	—	1
1900	7 (9)	—	1	9	—	2
1901	7	—	—	6	—	—
Totals	78 (80)	18	23	47 (52)	10	12
				78 (80)	18	23
GRAND TOTAL of both categories				125 (132)	28	35

NOTES.—(1) The figures in brackets represent the total number of charges against the vessels enumerated. The same vessel occasionally repeated an offence in the same year.

(2) During 1895 and 1896, seven sailing trawlers registered at Hull and Grimsby were also charged under the second category of offences.

(3) During 1899, two of the eight British trawlers concerned in collisions hailed from Fleetwood.

(4) During 1901, one of the seven British trawlers charges under the first category hailed from Fraserburgh (N.B.) A eighth vessel was also charged, which was registered at Brøvik, and was probably therefore a British vessel sailing under the Norwegian flag.

APPENDIX F.—*continued.*

No. 6. PROF. H. HENKING: The FISHING of the NORTH SEA by means of GERMAN STEAM TRAWLERS (according to statistics collected by Harbourmaster Düge in Geestmünde). *Mittheilungen des Deutschen Seefischerei-Vereins*, No. I, 1901.

(*Extracts, translated from the German original.*)

"After the exhaustive data provided by Garstang concerning the results of the trawl fishery of Great Britain, it can no longer be doubted that a constant diminution in the products of the fishery in question has taken place during the last decade.

"The results of the Geestmünde statistics render it possible to corroborate this observation of a fall in the catch. We obtain the following averages for the 5 years available for consideration:

YEAR.	Number of Voyages of German Steam Trawlers forming the basis of the calculation.	Average catch per day absent from Port (lbs.)
		Lbs.†
1893	1,093	1,978·76
1894	1,345	2,252·30
1895	1,362	2,225·45
1896	1,504	1,914·17
1897	1,251	1,641·89

"These figures refer essentially to the above-mentioned 20 fishing banks. The reduction in the catch has continued constantly since 1894, *in spite of* the fact that a *very substantial increase in the catching power* took place during 1895 and 1896 when the otter-trawl was brought into use on steam trawlers.

"Although for definite reasons I would prefer to avoid the expression 'over-fishing,' nevertheless there can be no doubt that the rapid diminution in the amount of the catch constitutes a *serious danger* and deserves the most careful consideration."

"The following three propositions with reference to the fisheries in the North Sea are therefore permissible:

1. The catch must yield marketable produce, and that in sufficient quantity to render the fishing operations a profitable business.
2. There must be a sufficient replenishment (*i.e.*, by immigration or growth) to balance the quantity of marketable produce annually fished out.
3. The number of steamers or other fishing vessels ought not to exceed a certain maximum.

"An indication that the number of steamers in the North Sea has already exceeded the critical point can be recognised in the fact that the steamers disperse in ever-increasing number towards the more distant and less fished regions.

"The annual replenishment of the stock of ground fishes in the North Sea, from the point of view of marketable produce, must be regarded as insufficient, according to the data at present available, inasmuch as the general proceeds are falling off.

"The notion of what is marketable, and what unmarketable, changes in the course of time. Already many species of fish are brought to market in large quantities and sold, which only a few years ago would have received no attention, *e.g.*, many species of skate and ray. The smaller fishes now also realise better than formerly. As the maximum size of fishes is attained with increasing rarity, the market acquires a tendency to lower the minimum size of the marketable species. In England this, as is well known, has given rise to the lively complaints which have been raised against the destruction of undersized fish, especially flat fishes, and which have already led several times to the formulation of definite legislative proposals.

"Among us in Germany there are no market transactions in such undersized fish, on which account the statistics furnish no material for a numerical determination of their quantities. On that point, as to what proportion of the part of the catch thrown overboard by the fishermen consists in small unmarketable material, nothing accurate is known. To ascertain that ought to provide a commendable task for the proposed International Investigations in the interests of the sea fisheries."

* The italics are Dr. Henking's.

† The North German *Pfund* is slightly heavier than 1 lb. avoirdupois. At Bremen 1 *Pfund* equals 1·1 lb. avoirdupois.

APPENDIX G.

Two LETTERS addressed by Admiral Sir JOHN COLOMB, M.P., to the EARL OF ONSLOW.

Dear Lord Onslow,—

14 March 1904.

THANKS for your note. Some time ago, I sent copies of the Fisheries Bill to which your note refers to those at Yarmouth representing the Fishery business, stating that a Select Committee was about to sit, and notifying that if desired I was sure evidence from Yarmouth would be acceptable.

I have received no intimation of any such desire as yet.

I am, &c.

John R. Colomb.

The Right Hon. the
Earl of Onslow.

Dear Lord Onslow,—

17 March 1904.

I am much obliged to you for your letter of yesterday's date, and shall be glad if you will be so good as to record on the proceedings of your Select Committee that my constituents do not themselves desire to tender evidence, but are in accord with the views of Mr. Capps.

I am, &c.

John R. Colomb.

The Right Hon. the
Earl of Onslow.
